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Photos by M. Rosenfeld

Start of the second heat of the race for the Col. Green Trophy at Miami. "Red" Collins in the lead, Harrison, in "Non Sequitur XI," third from left

The Miami Regatta

International Outboard Race Brings Boats From England and Italy.—Many Sailing Events

By HERBERT L. STONE

FOR the first time since outboard racing became a national pastime in this country the sport took on an international tinge at the Annual Miami Beach Regatta, March 19th and 20th, when England and Italy were represented in the races for the most coveted outboard prize, the Col. Green Trophy. Both of these countries sent their best outboard drivers to compete in this event, England being represented by Charles Harrison, of London, driving his record-holding *Non Sequitur XI*, with an American Elto motor, and Italy by Edmundo Turci, who raced in his *Italia*. As both of these drivers are top-notchers, and their outfits were of proven merit, all hands were looking forward to the most interesting running of this classic event since the trophy was placed in competition many years ago. But these hopes were destined to change to a sense of disgust after two stirring heats in the first day's racing, when the third heat ended in a dispute that has not yet been settled, and, whether justified or not, left the American drivers open to charges of sharp practices and poor sportsmanship. We hope these charges may not be substantiated. If they are proved, it will leave American sportsmanship, as exemplified in power boat racing, under a cloud which, after the Detroit mess last September, will take a long time to dispel.

It all happened this way. The first heat for the trophy saw 18 boats in as hot a race as anyone has ever witnessed. The pace maintained over the 4½-mile course of three short laps was terrific. It was the first appearance of the foreigners, and neither got off to much of a start. Harrison was in the middle of the bunch of boats, and the Italian, in a position where he was getting more wash than he fancied, cut his motor to get out of the mess. Fred Nichols, of St. Louis, led for a lap, but when his acrobatic boat turned a complete somersault near the judges' stand, "Bill" Crawford, of Miami and New York, went into the lead, closely pressed by the English driver, whose boat showed tremendous bursts of speed on the straightaways. Crawford, however, kept his lead while Harrison and Horace Tennes, of Chicago, had it nip-and-tuck for second place, with the latter gaining on the sharp turns and the Englishman opening up on the stretches.

Crawford got the finish gun only four seconds ahead of Harrison, the latter beating the Chicago driver for second place by only 1.27 seconds. The Italian finished in tenth position, his "revs" being way off, according to his own account of the affair. The speed was 44.435 m.p.h., very fast for the course.

In the second event the fleet was reduced to eight starters. In a fine start the English driver got away in second position. Crawford soon developed engine trouble and C. (Red) Collins, in *Trojan*, led all the way, pressed hotly by *Non Sequitur XI*, and won by about

The express cruisers furnished some keen competition at Miami. Start of the Cruiser Free-for-All

the same margin as did Crawford in the first heat, Cal Leeth being third. So far, so good. It had been fine, clear racing, and the English visitor had shown that he could drive in keen competition. The Italian was not a starter in the second heat. Something was wrong with his Laros motor, which had been running beautifully in the early trials, and he did not compete again. As Crawford, winner of the first heat, finished in eighth place, it left Harrison with 722 points to 625 for Collins, his nearest competitor, and it looked as if the old cup might be due for a trip to England. Up to this time the American drivers had not paid much attention to the foreign pilots, but now all Harrison had to do to win was to finish in the upper half of the field in the last event.

Charles Harrison, of London, who was leading for the Col. Green Trophy until a disqualification lost him the last heat

Under fine conditions the third and last heat was run the second day. At one minute before the start the big hand-operated clock on the judges' stand began marking off the seconds. With 30 seconds to go, some six or eight of the boats opened up and started full tilt for the line. Harrison was in the middle of the mess, his eyes on the clock. They had almost reached the line when an aerial bomb was exploded ashore and, thinking it was the starting gun, the boats tore over the line and were on their way — all but two, piloted by Bill Crawford and Travis Chestnut. These hung back until the hands of the clock showed the time was up, and then they crossed. Two others turned back and crossed again, but the first half dozen, with Harrison among them, kept on, thinking the start was proper. The Englishman, driving his best, led the fleet around the three laps, but, of course, was disqualified, while Bill Crawford, starting properly, and loafing around the three laps, got the winning gun at a speed of 38.5 m.p.h. And that's that.

The charges are, of course, that the disqualified boats "teamed up" to pull *Non Sequitur* across the line ahead of the gun. That is certainly the impression one got from watching the affair; and yet it might only have been over-eagerness on the part of these drivers, and the firing of the bomb at a most inopportune time, that accounted for the affair. Harrison himself is quoted as saying: "I didn't start by the gun. I started by the clock and I believe I hit it right on the dot, but the decision of the judges is final and I have no criticism to make. The racing is cut-throat in a way — the boys are driving all the time. I liked it — and I learned a lot." We'll say he

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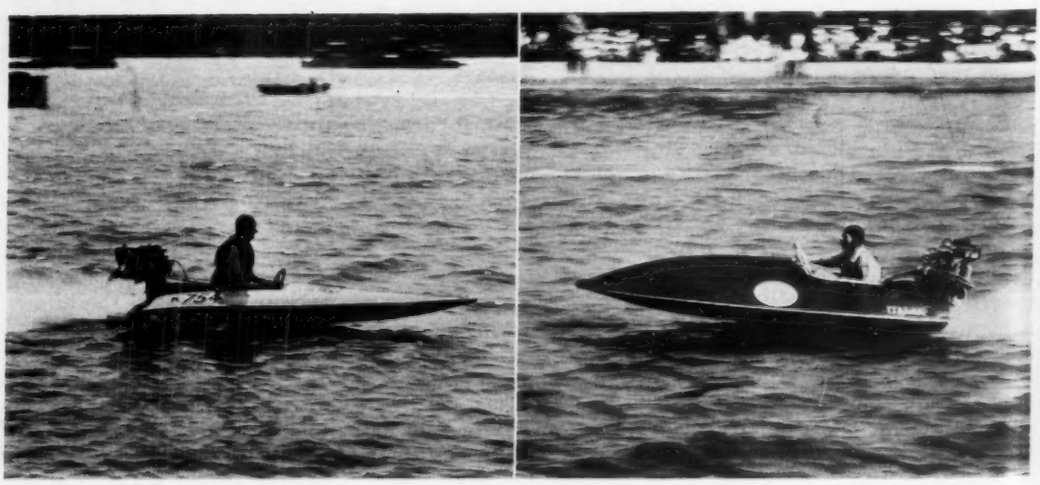

"Non Sequitur XI," the British entry (left), and "Italia," driven by Edmundo Turci

The race for the Prigg Runabouts brought a big fleet of these little one-designs to the line

did. The judges say the clock was right and that the disqualified boats all crossed too soon.

In spite of his disqualifications, Harrison took second place in the final standing, Crawford winning by reason of two firsts with 969 points to Harrison's 722 in only two heats. It was a tough break.

Pending an investigation of the matter by the A. P. B. A., the Miami Beach Yacht Club has not, as this is being written, turned the cup over to Crawford, although the Florida Outboard Motor Association has cleared the nine American drivers, most of whom are professionals, of charges of unfair tactics. There were rumors floating about Miami, also, as to someone's tampering with the Italian's Laros motor. Probably groundless, but persistent, nevertheless. It's too bad that these international affairs can't be run without employing questionable methods. We still believe the great body of American sportsmen would sooner lose fairly than win by sharp tactics.

While the race for the Col. Green Trophy was the big event on the two-day card, the rest of the program brought out well matched fleets and produced keen racing. Which speaks volumes for the sustained interest in power boat racing as conducted at Miami, where the conditions and setting are ideal for the sport from the viewpoint of both contestants and spectators. There were races for all classes of outboards, for stock runabouts, for express cruisers and for displacement boats — enough classes to provide for over three hours of racing each day.

George Martin, of South Bend, Ind., was high point winner of the regatta, piling up a total of 2395 points to 1956 for Tommy Estlick. The results in the various classes are given below. All in all, the Florida Grapefruit Circuit opened the racing season with a splash that augurs well for the coming summer in northern waters.

The Sailing Events

There were two sailing events run during the week that brought together most of the boats on Biscayne Bay and many from Palm Beach. The first of these was the annual ocean race for the Lipton Trophy, donated by the generous Irish baronet some years ago. This was sailed over an outside course off Miami Beach. It brought a mixed fleet of seven starters to the line out of

(*Continued on page 100*)

William Crawford, in "University of Miami," won the Green Trophy for outboards after Harrison and several other drivers were disqualified for beating the gun

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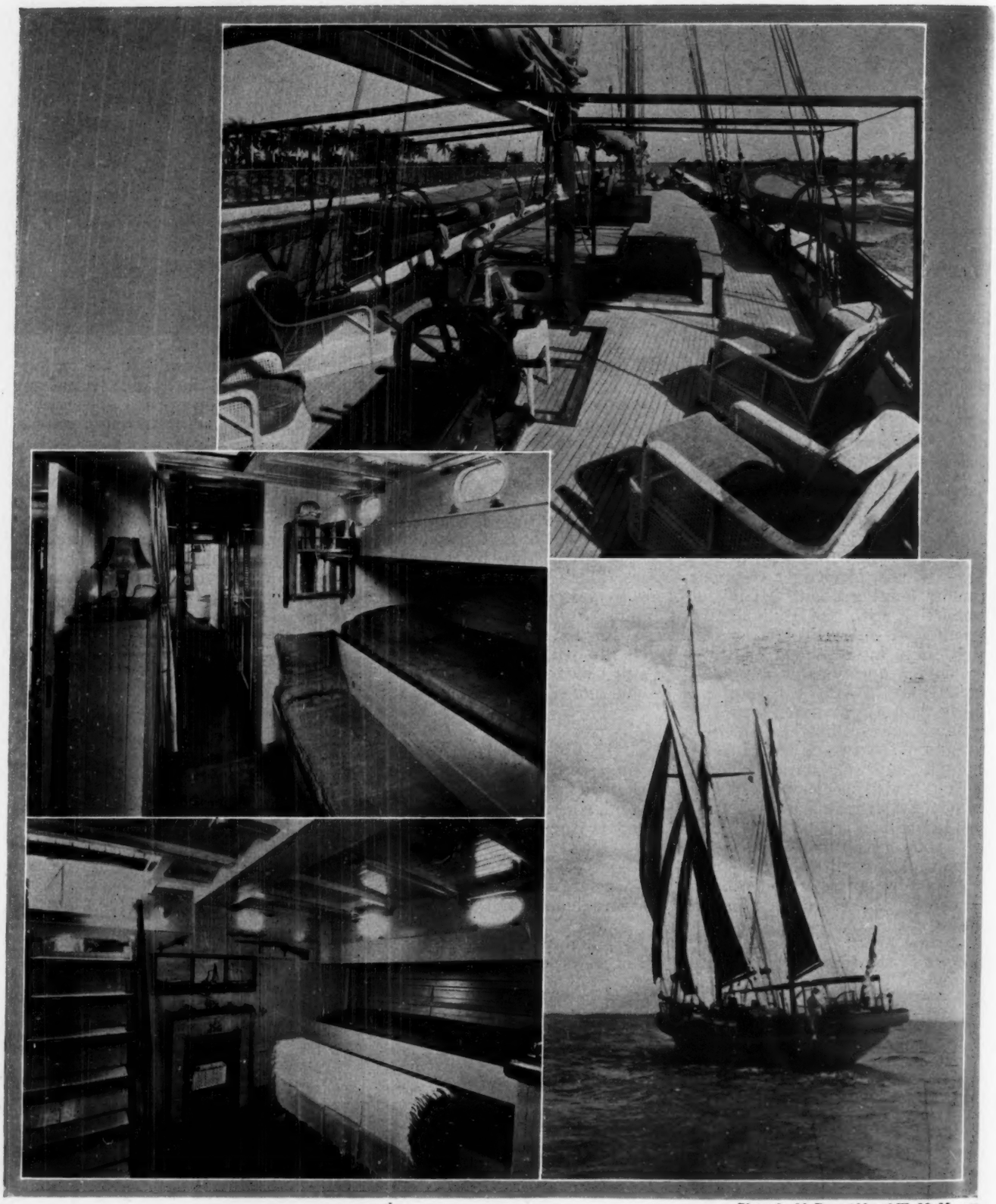
Taking the upper turn in the race for stock runabouts, 250 h.p. class. Won by Jack Rutherford's Chris-Craft



Photos by M. Rosenfeld and W. M. Munroe

"Grampus"

A Centerboard Auxiliary Ketch Owned by C. Townsend Ludington, of Philadelphia and Coconut Grove. Designed by Wirth M. Munroe

Able, roomy and comfortable, this auxiliary is well adapted for shallow water cruising or for long outside jumps. The pictures show the after end of the main cabin, the passageway leading to the large double stateroom forward, and the flush after deck, the latter a delightful place to lounge. A 6-cylinder "V" drive Universal motor furnishes the power. Length o.a., 60 feet; Water line, 47 feet; Beam, 18 feet; Draft, 4 feet.

"Naiad II," a 27-footer with an outboard auxiliary, anchored in Pot Holes Portage in North Bay, Ontario, where the waters of North Channel meet the barrier range

A Post Season Cruise to Georgian Bay

A Fall Cruise Through the Islands in a 27-Foot Outboard Auxiliary

By LEONARD C. HALL

WEATHERWISE skippers of the Lake Huron gillnetter fleet warned us that the month of the autumnal equinox was no time for three inexperienced amateurs to go "gallivanting" around the Great Lakes in a small sail boat.

Particularly were we advised to avoid Georgian Bay during the two weeks following September 10th. For the Bay is old Boreas' own stewpot, one veteran solemnly avowed, where every hellish combination of wind and water is distilled and double-distilled before it is let loose on broader waters. Thus a good deal of sound advice is wasted annually upon the young and unchastened.

August was well nigh spent before Ted, Wallace and I set out from Pine River, on Saginaw Bay, for a thousand-mile "post season" cruise to the North Channel of Lake Huron and Georgian Bay in the 27-foot sloop *Naiad II*. It was our first cruise.

Naiad II is a V-bottom centerboarder measuring 22 feet on the water line, 8 feet 6 inches beam, and 2 feet 6 inches draft. She was built in 1923 in Alpena, Michigan, of native white oak and cedar. When I bought her the sloop had a huge open cockpit. Six weeks of beautiful cruising weather had been squandered in building a trunk cabin to provide sleeping accommodations for three with a cubbyhole under the bridge deck for the dog.

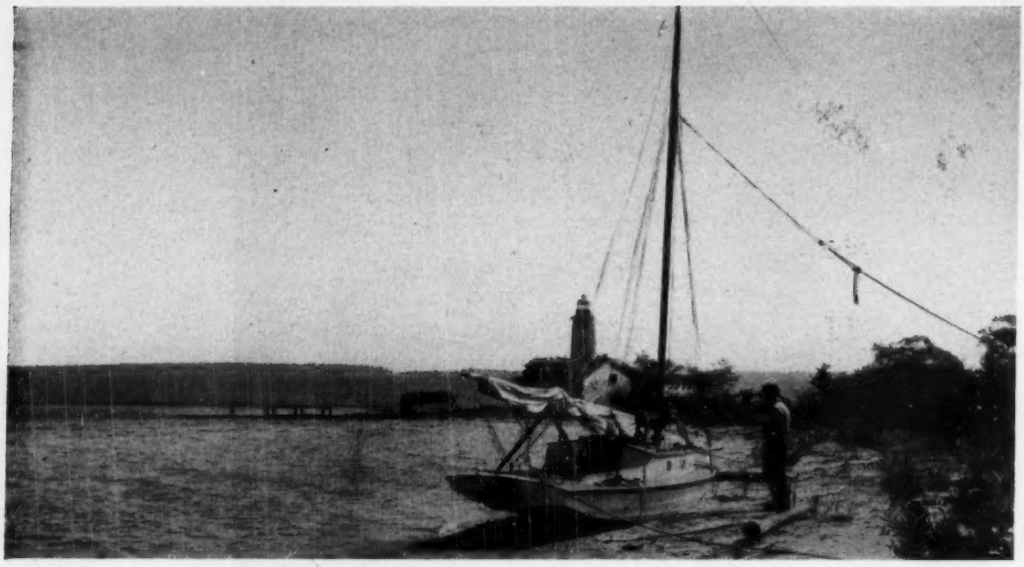
We had arranged to "hitch hike" the first 200 miles to the Straits of Mackinac aboard the motorship *C. E. Redfern*, which was then discharging cargo in Bay City, 36 miles up Saginaw Bay. On August 20th, just six hours before we were due alongside the *Redfern*, we slapped on the last dab of copper bottom paint and slid *Naiad II* into the Pine.

Amid the excitement of fitting out we stepped the mast without first putting on the mast rings and sailed with the crew clambering over a pile of duffle heaped indiscriminately in the cockpit. The 10-horsepower Johnson outboard purred on the stern bracket while we bent sail underway.

Fortunately, the *Redfern* was delayed in loading fuel oil and was still at her berth in the Saginaw River when we drew alongside an hour after the appointed sailing time. Slings were passed under *Naiad II* and in a jiffy she was sitting on deck. Twenty minutes later we were outward bound.

The 30-hour passage to the Straits went quietly except for those hectic interludes precipitated by Pat, my two-year-old bull terrier. He upset the cook in pursuing a rat through the galley. He tried repeatedly to walk the narrow cap of the *Redfern's* bulwarks, and once was found sleeping in the bos'n's bunk. We began to suspect that a dog afloat spelled trouble — a suspicion later to become a firm conviction.

At one o'clock of a calm, starlit morning the twin Diesels of the *Redfern* stopped and the rattling cargo winch dropped *Naiad II* neatly in the middle of the



A northeast gale threw "Naiad II" on the beach and her crew of three took shelter in the abandoned lighthouse

Straits of Mackinac. A line was dropped overside and the crew slid to the deck of the sloop, Ted and I leaving patches of skin on the rope in the sizzling descent. The dog came last, squirming in a bight. Bells clanged faintly and the ship's engines rumbled. We fended off as the sheer black sides slid silently past, and the ship was gone. Then the outboard set up its businesslike chatter and propelled us to an anchorage behind the railroad ferry docks at Mackinaw City.

During the next fourteen days the weather gods smiled (up their sleeves, we later decided) while we made a Cook's tour of the North Channel, following the trail of the scores of yachts which each season visit those island-studded waters. The dog fell overboard the first day out of Mackinaw, establishing a routine which he religiously observed throughout the cruise — except that on special days he fell in twice.

The third night out we entered Canadian waters in the North Channel after a rough beat to windward across Potagannissing Bay. Here we diverged from the main-traveled course to find anchorage in Milford Haven on the southeastern shore of St. Joseph Island.

Naiad II ghosted through the entrance of the Haven on the expiring gasp of a dying breeze with the water gurgling softly under the bows. The tinkle of a distant cowbell punctuated the night chorus of the crickets and bullfrogs of the marsh. Peace dwelt there and it seemed a sacrilege when our anchor splashed at the head of the narrow harbor and sent echoes rattling among the hills. In the morning we awoke to the whine of bandsaws in a mill hard by and ashore we found a picturesque French-Canadian hamlet huddled under the lee of the northern hill. The store keeper informed us that few yachts — but many rum runners — called there.

Approaching Blind River that afternoon, we failed to untie one reef point before loosing the leech pendant, in shaking out a reef, and thereby ripped a four-foot gap in the mainsail. The mishap was serious, for we had only one suit of sails, the mainsail four seasons old and the jib patched. The jib, we found later, would serve as a makeshift spinnaker, raffee, and storm trysail.

It was a black, windy night when we drew abreast the sawmill town of Blind River on the Ontario shore of the North Channel. The glittering shore lights were confusing. Heading in upon what we thought were the lumber docks we nearly piled *Naiad II* on Susanna Island in the center of the harbor. Luffing past this menace, we sailed blithely through the ruins of an abandoned lumber dock and came about to find ourselves hemmed in by a stockade of ugly broken piles. Feeling our way out of this trap under power, we approached a steam barge which, in the darkness, appeared to be anchored well out in the harbor.

"Ahoy, aboard the steamer!" Wallace shouted in his best nautical manner. A row of dimly outlined heads appeared along the rail above us. "Where's the government dock?" we inquired. There was a gust of laughter.

"Why, we're tied up to it," a sailor said.

It was Saturday night in Blind River and everyone — lumberjacks, farmers, Indians and sawmill hands — had come to town.

Two days later we sailed through Little Detroit Passage, where the broad North Channel narrows to a bottle neck, and got our first taste of North Channel haze. It looked like smoke, smelled like fog and was definitely opaque. Fishermen told us that it was not ordinary haze — it was North Channel haze. The harder the wind blew the thicker it became. A fresh sou'west breeze was piping up when we passed through Little Detroit and the visibility was one-quarter mile. Carrying full sail in the fair wind, we entered the island maze along McBean Channel. After three hours of dodging rock islets in the murk we nearly ran down the James Foote Patch float light and finally oriented ourselves. We were five miles east of our calculated position.

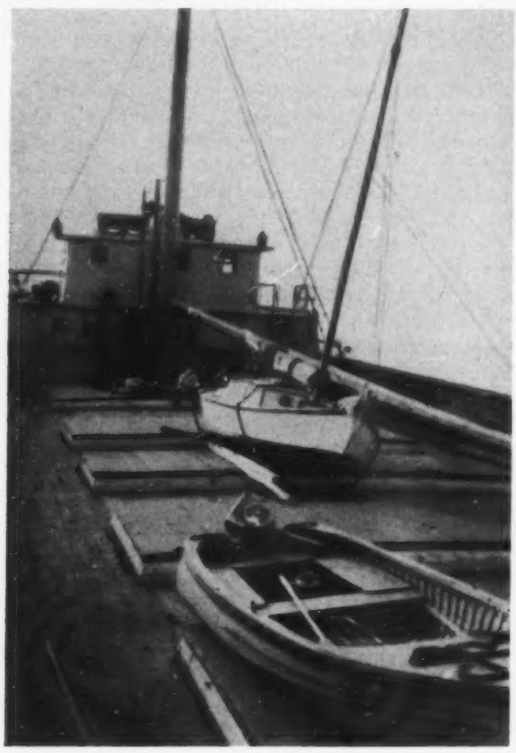
The sou'wester continued to freshen and off Narrow Island, at the entrance of the channel to Little Current, Manitoulin Island, it was decided to shorten sail before the sloop ran herself under or some of our precious canvas carried away. Ted went forward to douse the jib. He had the canvas inboard when a savage puff caught it. He held on and was literally snapped into the water ten feet out. Clinging to the jib sheets, he skittered from wave crest to wave crest like a skipping stone. In the excitement of pulling Ted aboard, the ubiquitous Pat ventured to the cabintop to offer him a welcoming lick, slipped and went overboard at the precise moment that Ted came on deck.

An hour later, shortly after our arrival in Little Current, the incorrigible animal nearly precipitated a break in diplomatic relations with the Dominion by thrashing the pet Airedale of the local customs official. And it was in Little Current that Wallace entertained a

small crowd by doing a cartwheel into the cold, deep water. In attempting to snub *Naiad's* stern line he miscalculated the sloop's way and was snapped over the stringpiece in a twinkling.

The following week was spent among the islands of the mountain-bordered waters of McGregor Bay, Narrow Bay, and Bay Finn, familiar to the Great Lakes cruising fraternity. By endless sounding we worked *Naiad II* into North Bay, at the head of McGregor Bay, and tied up to the rocks at Pot Holes Portage at the foot of the Cloche mountains.

Returning to Little Current, we outfitted for a bout with Georgian Bay and the winds of the equinox. No yacht had passed through Little Current for three days prior to our departure, September 5th, indicating the wisdom of a score of skippers who made the trip down Lake Huron well in advance of the big winds. The reliable westerly — our daily companion in the passage from the Straits of Mackinac — got up with the dawn again and gave us a fair wind out of Little Current. Steering a steamboat course, we made handsome time among the islands to Killarney, picturesque fishing hamlet at the northwestern corner of Georgian Bay.

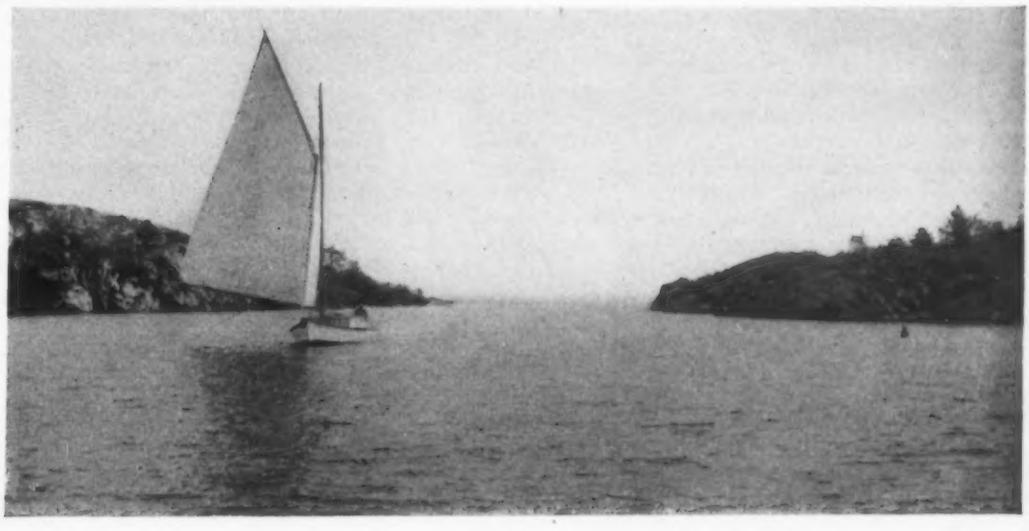


"Naiad II" was taken on the deck of the "C. E. Redfern" from Bay City to the Straits of Mackinac where she was unloaded in mid-channel at night

While we idled in Killarney the breeze had backed to sou'west and went to work with such vigor that spray was spouting high over Red Rock when we nosed out into the big Bay under jib and double-reefed main. It was easy to find One Tree Island. Following instructions, we bore down with the island to leeward. Then seas began to break close ahead without a hint of a channel opening. When iron gray rocks suddenly slanted up a few feet under the surface there was scant time to round to and claw off with the breakers under our stern. After a rough hour of beating on and off, the channel was located on the opposite side of the island.

Once we had gained the shelter of the lofty rock walls of Collins Inlet, which for twenty miles boldly slices through the foothills of the range, the roar of the surf outside quickly faded. Though the wind moaned in the gnarled jack pines high on the perpendicular cliffs, there was not enough air at the surface to give steerageway. While we furled sail and started the outboard, the rain came, a steady, cold downpour that chilled. There were few days in the next three weeks when rain did not fall. We anchored at dusk off Skull Point, a settlement of three weather beaten shanties and a Catholic mission. The deck leaked abominably over the bunks and that night we slept under oilskins — dry on top but wet underneath.

Next morning we met Matthew Kagins, Indian guide, and his father, who volunteered to pilot us through the little known "Indian" channel among the rockly islets that clog the eastern entrance of the Inlet. The dignified old chief, who spoke not a word of English, went forward as lookout while his son took the tiller. With the outboard turning at full speed the sloop headed into what resembled a flooded quarry. Time after time the helmsman held straight for a jagged ledge until the bowsprit seemed about to scrape the moss from the rock. Just as a crash seemed inevitable the old chief would signal casually and we would slither off at right angles with tree branches rattling against the shrouds. An hour of twisting and turning in channels better suited to a canoe brought us out of the last tree-canopied passage into the open water of the Bay. There our guides left us to row to their village two miles down shore. We anchored that night opposite the ruins of the old lumber town of



A fair wind in Little Detroit Passage

French River. Where 3,000 lumberjacks and sawmill hands once lived there remained only a palsied, toothless old fellow who tended the range lights.

Rain squalls and fluky winds the next day made our plotted course resemble a stock market graph in the hectic days of 1929 — a mess of acute angles. It was dusk when we entered the beautiful island group lying behind Point Au Baril. Of all Georgian Bay's 30,000 islands, those of the Point Au Baril section impressed us as the most sightly. We followed the inside passage to Parry Sound.

Departing Parry Sound, we followed the devious South Channel, a well-marked small boat passage to Georgian Bay. The channel was so narrow in places that timbers had been chained to the rocks to prevent boats from committing hara-kiri on the jagged ledges.

The next day was the ninth of September, and for the first time we gave serious thought to the warnings of the fishermen back home. Undeniably the storm gods were cooking up some deviltry and we had a distinct feeling that it spelled trouble for us.

All morning we had been trying to get the Western Islands — a low, forbidding group lying fifteen miles offshore — from under our lee. A fickle breeze that played clear around the compass made our progress painfully slow. By late afternoon we had gained only nine miles to reach a position off Christian Island, largest of the group in the southeastern sector of Georgian Bay. Tacking across the mouth of Quai Des Roches, on the northern end of Christian Island, we passed the wreckage of a big steel freighter — a singularly depressing sight. The last twelve hours of baffling winds and dizzy tossing in cross seas had brought us to a condition where we were ready to believe in omens. We abruptly abandoned our plan for a night sail across Nottawasaga Bay to Collingwood, 25 miles southward. The sun had a jaundiced aspect and we sought shelter behind Bar Point, southernmost tip of Christian Island.

We dropped anchor in a shallow cove behind the low sand point where an imposing lighthouse stands abandoned. At midnight it was blowing a gale from the westward and the song the wind sang in our shrouds, protected though we were, was no lullaby. In the morning we rowed ashore and found the shrubs on the windward shore taking it lying down, while branches were leaving the larger trees in numbers. We built a roaring fire in the fireplace of the lighthouse dwelling and settled down to patient waiting. The house and 70-foot tower were built like a medieval castle with stone walls two feet in thickness. Spray from the beach, 50 yards to windward, whipped our faces when we mounted to the open lantern deck.

In mid-afternoon we made a vain attempt to shift to an anchorage up in the bay where a high wooded bluff would afford shelter should the wind haul to the nor'east. However, we could not buck the vicious chop then running in the sheltered bay, even with motor and triple-reefed mainsail. Turning tail, we scuttled back to the cove behind the lighthouse. We dropped a 60-pound kedge on 20 fathoms of one-inch line and a 30-pounder on 10 fathoms, and parcelled the lines at the chocks. *Naiad II* rode in 16 feet of water over gravelly bottom, 100 yards offshore. At sun-down we left the cheery fireplace to go aboard.

Shortly after ten o'clock I went on deck and found that the gale had edged into the north and was beginning to reach into the cove. Cold rain whipped slantwise down the wind and there was an occasional flurry of snow. The sloop was beginning to surge heavily on the anchors as the seas mounted. Shivering with cold, I had scarcely regained my bunk when I felt the unmistakable tremor conveyed to the hull by dragging anchors. When Wallace and I reached deck the sloop's stern was in the outer line of breakers. The two anchors must have literally bounded over the gravel, so rapidly did we drift. The gale was now blowing great guns out of the nor'east, its full force striking into the cove. The anchor light had blown out.

The anchors held the bow up so that we went into the surf stern first. Ted remained below to wrap food and matches in oilskins. Wallace and I went over the side into the surf waist-deep and put our shoulders under the counter in an effort to bring her ashore broadside on. We were battered about unmercifully, but finally the sloop touched sand broadside on, and a grand-daddy sea hoisted her well up the beach and dropped her with a solid jolt.

The combers broke over the cabin. The cockpit was awash and beginning to fill with sand until we ran the throat halliard to a scrub oak and canted the sloop until the bottom planking took the buffeting. Thirty minutes after she began to drag, *Naiad II* was sitting solidly on the sand, apparently taking small punishment. When all was snug we discovered that we had been wading around in shirts and shorts and that it was very cold. The surf ran far back through the underbrush and the wind sent us staggering as we packed our duffle to the lighthouse through water knee deep. The gale steadied in the nor'east, and then backed to its original westerly quarter and blew itself out before morning.

When the sea died down *Naiad II* rested in a sand cradle twelve feet from the water's edge, her skeg and rudder half-buried in sand. We had been set ashore on the first stretch of sand beach we had seen since leaving St. Ignace, 300 miles back. We agreed that there is a special providence watching over unskilled young men cruising for the first time.

Two hours' work with pries and blocking, and the sloop was again afloat, apparently none the worse for wear. We sailed to Collingwood. There we learned that the gale had reached its peak at 65 miles an hour the night we went ashore, and that a stone barge had parted its moorings and run amuck in Collingwood harbor.

Business called Wallace home and Ted and I continued up the West Shore, bound for Lake Huron and home. Light shifting winds and steady, cold, drizzling rain were the rule. Since our available time was growing short we decided to push on day and night.

After a cold, wet passage delayed by storm warnings, we finally reached Blind River in time for Ted to board the Canadian Pacific enroute to his classroom.

With the cruise practically ended on September 22nd, the storm gods relented and there came invigorating autumn days that turned the forests of the North Channel country into a wonderland of color. Late in October I sailed *Naiad II* across the Channel to Cockburn Island where the hospitality of the cheery Scots of Tolsmaville made my stay enjoyable. On October 27th, during a driving snow storm, the *Redfern* called at Tolsma Bay and the sloop was hoisted atop her deckload of logs for the trip back to Bay City.

Shortly after *Naiad II* was laid up for the winter the crew met to balance the books of the season's experience. The audit showed that after incredible blundering we had learned to handle the sloop in any weather; that we had had the most enjoyable vacation of our careers; and that we had developed a new and wholesome respect for the ways of wind and sea. Charts of Lake Superior were spread out — after it had been unanimously agreed that the next cruise will be in the good old summertime.

The first Curry racer to be sailed in the United States is the "Barracuda," owned by C. T. Ludington. She was tried out during March on Biscayne Bay, and although not racing in any class she "cleaned up" easily and proved very fast on all points of sailing

The Advantages of Transverse Battens

The Importance of the "Slot-Effect" Demonstrated by a Simple Experiment

By DR. MANFRED CURRY

PRACTICE has proved that in light airs a strongly arched sail is superior, while in heavy winds a somewhat flatter sail is preferred. This is confirmed by nature in that the wings of slow flying birds show greater arching than those of the fast flyers. For this reason most of the International 6-, 8-, 10- and 12-Metre boats have several sets of sails, either cut flat or strongly bellied. Just before the race a decision is made as to which sail is to be used in the prevailing wind. The question arises — Why not use a sail with a changeable arch?

Must we go as far as China or Egypt to learn what a sail should look like? The Chinese junk uses a sail with long battens. Would the natives of China use this seemingly complicated system if they were not aware of a decided advantage, *i.e.*, the increased speed of their boats? Must we be reminded of the fact that a kite with a rigid surface flies one-third higher than the one with a canvas surface which is bellied by the pressure of the wind?

Without doubt, America has shown progress in the design of hulls for large yachts, but Germany is developing the design of small boats. I used long battens (wooden battens extending from the leech of the mainsail to the mast) in Germany on my boat, a 22-Square-Metre racer, in 1922. Since this time the batten sail has progressed from one class to another and has now made its way into the larger classes, in spite of the strong opposition with which it was met by the cruising fraternity. Today almost all small boats, and very many of the larger yachts in Germany use transverse battens.

Two years ago the German Racing Association decided, at the request of the Cruising Clubs, to bar long battens for all types of cruising boats. In a meeting of the Association held last December the same people who had been fighting the battens asked that this restriction be dropped for cruising boats. Why? Because a boat with a batten mainsail is faster and because a batten sail is cheaper, and lasts longer. It is also cheaper to have two sets of battens rather than two sets of sails.

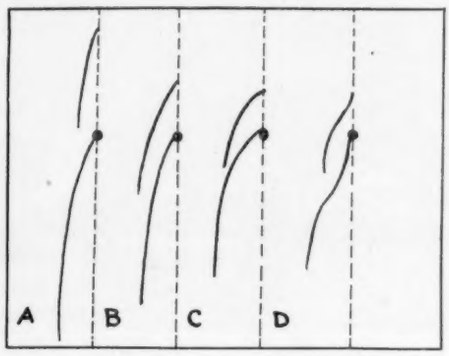
Long battens that extend from the leech to the luff serve the following purpose: They give the sail the uniform arching desired, and produce a somewhat rigid surface; they also admit of a change in the arching at will, as demanded by the prevailing circumstances. For example, the "belly" may be brought to lie in the fore-third of the sail by planing the battens thinner in that part; they are thereby rendered more pliable and bend more easily toward their fore ends, the flexible canvas assuming the same curves as the battens.

The arching should, as we know, depend on the strength of the wind. This may, to a certain degree, be regulated in two ways: The greater the tension under which the battens are inserted and made fast in the

pockets, the greater the arching of the sail. The same results may be achieved by the use of several sets of battens of different thickness or size. In a light wind thin flexible battens are used, these being inserted in the pockets under greater tension; in a stiff breeze a set of thicker and less pliable ones are inserted under correspondingly less tension. *A sail with battens will last from three to five years and keep its form, while a sail without battens has to be replaced every year or two.*

To be able to appreciate the superiority of the batten sail and to understand the great aerodynamic advantage involved we must first be familiar with the heart of every sail system. In my opinion, the success of a yacht stands or falls on the correct "slot effect" of her sails.

The new theory of sailing has revealed the fact that the suction in the lee of the sail is from two to three times as great as the pressure on the windward side. Thus, we sail with suction rather than with pressure. When close hauled, the wind passes from forward aft between the jib and the mainsail. A thorough study of the air currents on sails has taught us that with the correct relative position of the two sails a greatly increased driving force can be obtained. By forming a slot similar to a valve with a broad opening at the front and a narrow outlet at the back, the movement of the air is accelerated. This accelerated air increases the suction of the mainsail and thus the speed of the boat. To produce this effect only a small overlap of the jib is essential. The most efficient valve effect is created by the most highly accelerated air current — and this again is obtained with a very narrow slot.



1900–22 1922–29 1929–32 Battens Removed

A. Old fashioned rig. No overlap of jib. Jib has long base

B. Large overlapping jib (with outriggers) and wide slot

C. Most effective rig. Smaller overlapping jib with narrow slot and mainsail with long battens

D. If battens are removed both sails luff

A highly efficient slot-effect with a very narrow valve can only be produced with a mainsail stiffened by long battens. Any other sail will be back-winded near its luff by the wind off the jib. Sails without these battens offer only two alternatives: Either the after leech of the jib must be held far away from the mainsail, thus forming a very broad slot, or the mainsail must be cut very flat. In both cases the result is a rather ineffective valve. I have become so accustomed to battens that a mainsail of a small boat without them reminds me of an umbrella without ribs.

Inasmuch as wind tunnel experiments on airplane wings and metal sails have suggested a very pronounced arch — draft, as we call it in sails — why, in practice have we preferred flat sails? The reason for this is very simple.

Before the discovery of the overlapping jib for beating to windward the normal rig used was about as shown in Diagram A. When introducing the overlapping jib universally, we took special care to avoid any interference of the two sails, which manifested itself by the so-called back-wind on the mainsail. To obtain a satisfactory result we used outriggers for sheets (Diagram B). As happens with any new device, there are always more people willing to bar and forbid an improvement rather than to adopt it and try to improve it. So outriggers were forbidden in all countries! However, in this instance the adverse ruling resulted in a good effect. Unable to use outriggers, we either had to give up our big jibs or trim the sheets of these jibs to the deck. But a surprise was in store for us. *The boats were faster than before!* Some other radical change in the rig must have occurred in the meantime which changed the entire air currents. This was the use of long battens. Diagram C shows approximately the most efficient rig. Note the very narrow slot which is made possible only by applying battens. We are now able to use a strongly arched sail, as nature and aerodynamics taught us years ago.

While, without battens, this sail would be pressed in at its luff by the back-wind off the jib, we now force it to remain in this position and to create the highly efficient and much desired slot. The interesting feature is that the front part of both sails now operates with a *negative angle of incidence* to the wind, and while the luff of the jib when pointing high would tend to flutter (Diagram D), it is now drawing full through the air being pressed on it by the mainsail.

If we take the battens out of the mainsail on a beat to windward, not only half of the mainsail falls in and begins to flap, but — and this is the most interesting fact — *the jib falls in.* The rigid mainsail compresses the air between it and the jib so as to force the jib to draw — in other words, the compressed air is powerful enough to overcome the pressure on the leeward side of the jib caused by the negative angle of incidence. The bird's wing operates with the same negative angle of incidence, *i.e.*, the air current strikes the front part of the bird's wing on the upper side, as in the case of the mainsail and the jib in similar circumstances. There is no doubt that, if the bird's wing were not of rigid construction, the front part of the wing would fall in and the efficiency of the wing would be so impaired that the bird would be unable to fly. And this is the type of sail that is being used in the twentieth century! With the progress made in aeronautic and aerodynamic research this state of affairs seems incredible.

With a more efficient rig we are able to reduce the size of the sail as well as its cost. The greatest efficiency, however, is dependent upon several features; *viz.*,

1. The correct arching of the mainsail
2. " " cut of the jib
3. " " distance of the foot of the jib to the mast (Diagram C)
4. The correct lead of the jib sheet
5. " " amount of overlap, and
6. To a certain degree, the form of the hull of the boat.

And why are we not copying nature more closely; why are we not making progress; why are American yachtsmen not taking advantage of the rigid surface; why are they not using sails with long transverse battens? — Because of rules! Must we continue to do things the old way just because we have been doing them that way?

It seemed impossible to convince Americans of the value of the overlapping jib for beating to windward through the publication of articles until the Swedish *Maybe* beat the American "Sixes" by using these large jibs. I trust that in the case of the batten sail they will react more quickly.

May I now explain by means of a simple experiment, which anyone can try, why I am convinced that the batten sail is the sail of the future?

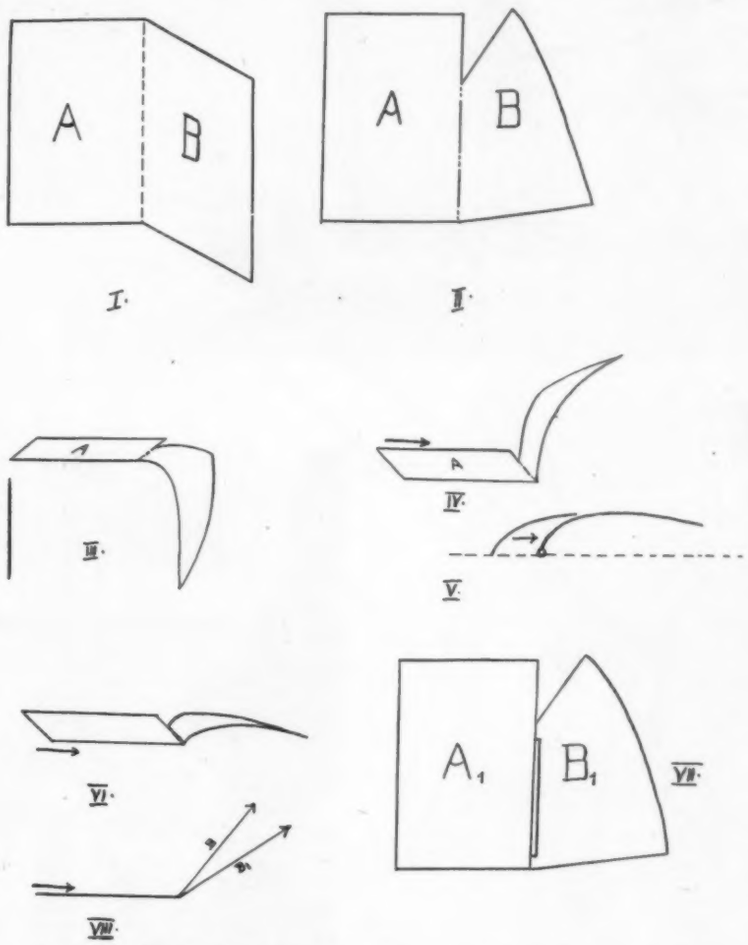
Take a piece of somewhat stiff paper (heavy writing paper which is to be cut down to half the size), fold it in the middle (Drawing I), and cut one side into the form of a sail (Drawing II). Now bend this side with your fingers so as to give it the arched form of a rigid batten sail. So that the sail will swing more easily, cut two slots, one above the other, in the fold of the paper which represents the luff of the sail (Drawing II). Now hold part B horizontally in front of your lips (Drawing III) and blow along the *upper side* of A. You will notice the astonishing fact that, although blowing towards what would be the lee side of the sail, the sail will move upwards and towards the air current, as in Drawing IV. Naturally, you can hold the paper vertically as would be the case in the sail. But holding it horizontally (as shown in Drawing III) will give you a still better proof of the force of the suction which even lifts the weight of the paper — representing the sail — and which would in this position hang down (Drawings III and IV).

If you blow on the lower side of A, which, relative to the curvature of the sail, would be the windward side, the sail will only be lifted up to the horizontal. (See Drawing VI.)

These experiments prove: 1. The correctness of the suction theory as well as the greater and more favorable force of the suction compared with the pressure. 2. The advantage of a rigid surface held in form artificially (by battens). 3. The favorable effect of the off-wind of the jib (now produced by blowing more or less strongly) which accelerates the air current in the lee of the mainsail and thereby increases the driving force of the mainsail.

I believe that this simple experiment, which any one can try in a few minutes, will prove my theories as well as complicated wind tunnel tests have done, and may put aside all doubts.

If the reader is interested enough to continue these experiments he may try the following: Enlarge the slots which were cut at the luff of the mainsail, as in Drawing VII. This experiment shows the advantage and disadvantage of having a slot between the mast and the luff of the mainsail. Then repeat the former experiment and again blow along the upper side of A, as in Drawings III and IV. You will notice that the sail (with same curve) does not lift as high as it did without the broad slot. See Drawing VIII.



An interesting experiment with paper cut-outs illustrates the effect of the negative pressure on the leeward side of a sail

This experiment proves the great disadvantage of any rig having a slot between the mast and the luff of the mainsail. I found this result in my wind tunnel tests of 1924–25, but at that time I believed that the detrimental effect was caused by the wind passing between the mast and the mainsail from the windward side to the leeward side, while it is the contrary which is true. The wind passes here from leeward to windward.

These experiments illustrate an entirely new principle of the forces acting on sails. The most important discovery is the fact that the much-feared back-wind caused by the wind off the jib striking the leeward side of the mainsail is not harmful, but advantageous, and increases the driving force of the sail if an artificially arched surface — the batten system — is applied.

Testing the Rig in American Waters

During the past winter several of the 20 square-metre class of racers designed by Dr. Curry were brought to this country, largely for experimental purposes, as there is no regular class here, and the first of these to be tried out was the *Barracuda*, owned by C. T. Ludington. This boat was sailed during March on Biscayne Bay, Florida, and the editor of YACHTING had the privilege of both watching and sailing her. The results were most interesting and the effectiveness of the batten sails seemed to be demonstrated.

This boat is 28 feet long over all, and has about 212 square feet of sail, measured, and about 280 actual, if the overlapping jib is measured instead of the fore triangle. In light breezes the boat was surprisingly fast. She seemed to move in the lightest zephyr. Undoubtedly, the shape of this hull, with its minimum of wetted surface, had much to do with this. In breezes of from 5 to 12 miles' strength the value of the batten mainsail and the so-called funnel effect was most apparent, and the *Barracuda* had no difficulty in passing her competitors on every point of sailing, but particularly on a reach. With the sails properly trimmed she sailed at times three feet to her competitors' two, and on reaches her advantage was even greater. In breezes of 15-mile strength, or over, she was overpowered with full sail (she has no ballast),

(Continued on page 100)

"Old Ironsides" Restored

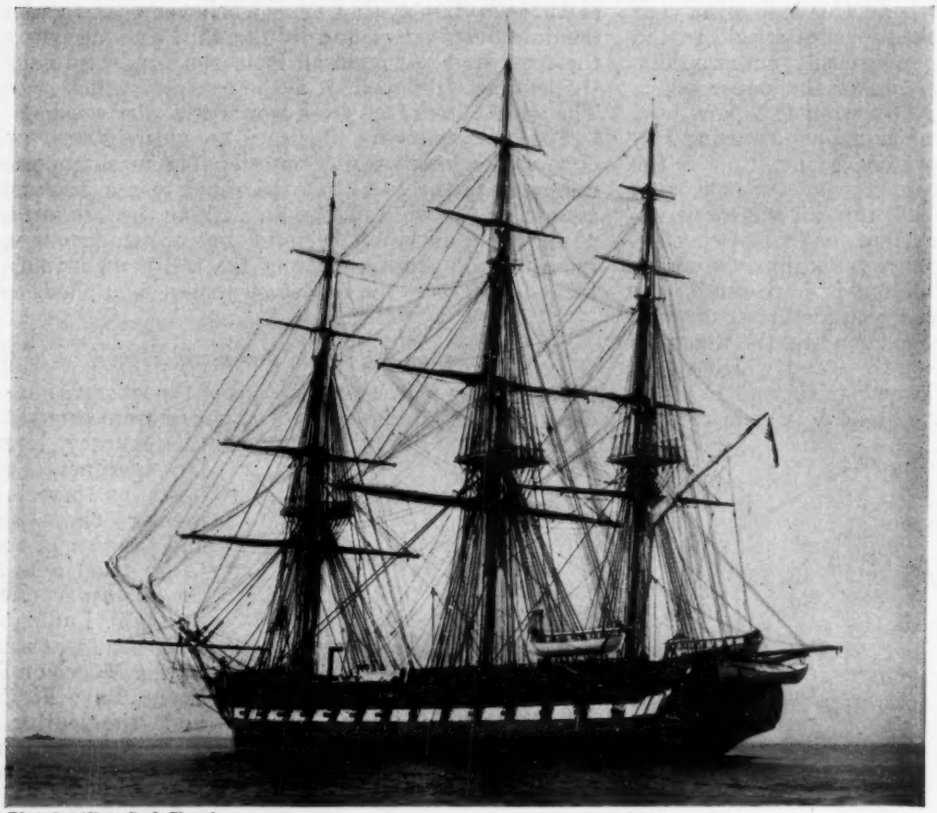
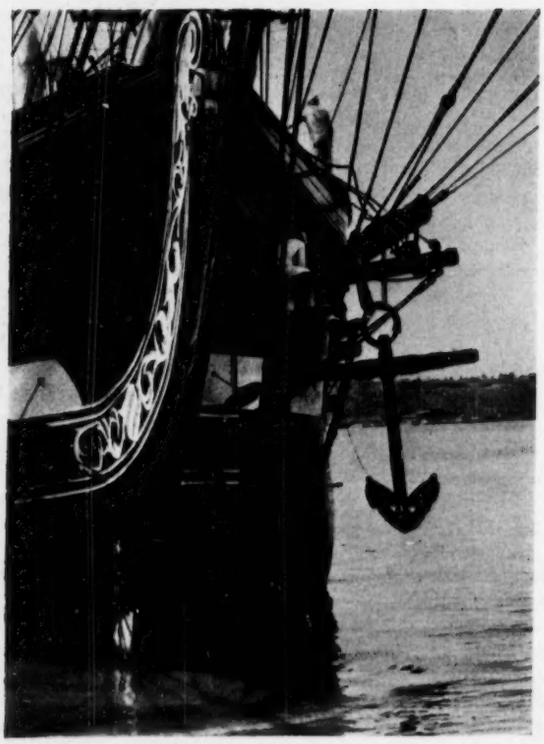


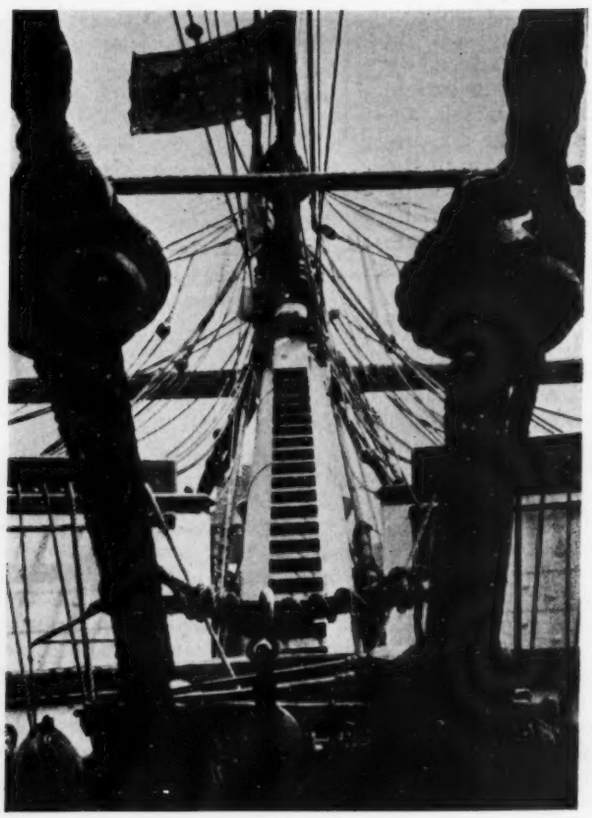
Photo by Albert Cook Church

To a sailor, the chief interest in the recent restoration of the famous frigate "Constitution" is in the degree of faithfulness with which the work of re-rigging her has been carried out

These unusual "close-ups" of interesting details, by Jeanette Griffith, show something of the nature of the work involved, and of the tremendous amount of gear on a man-of-war of this size. A seaman had to be a sailor in the days when the "Constitution" was in her prime

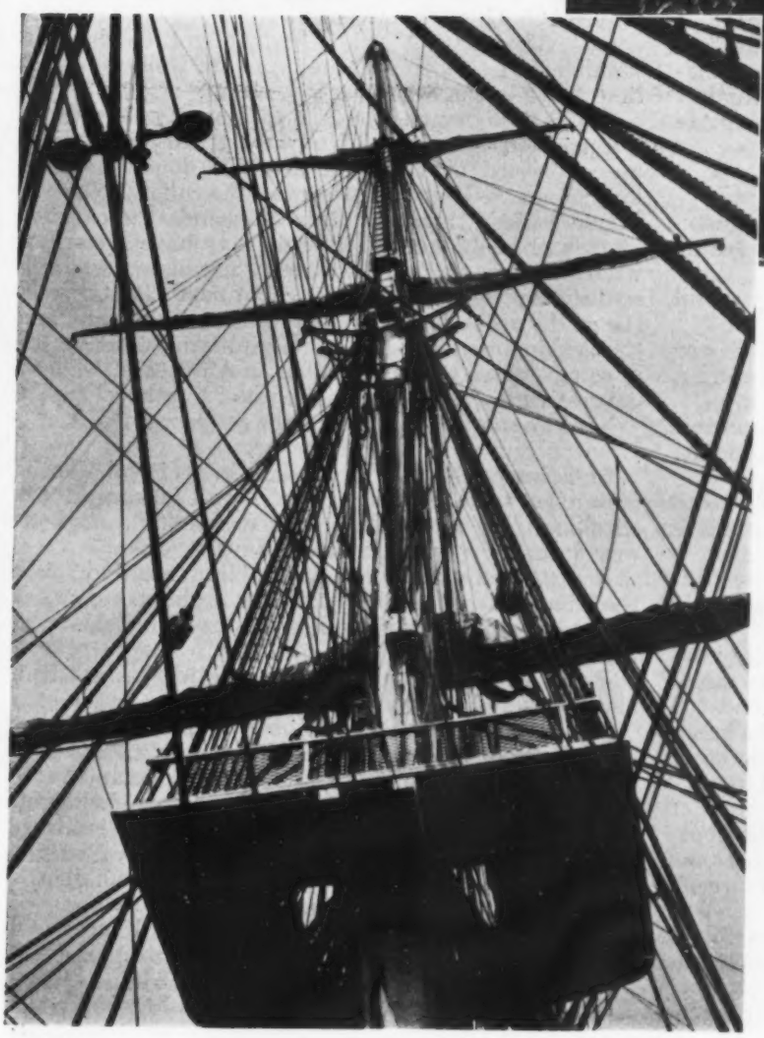


Bow, showing scroll boards, cathead and anchor, and bowsprit shrouds



Right. Looking up at the sharply steeved bowsprit, with the spritsail yard beneath it. The double forestay was set up by lanyards

The main chains, starboard side. The shrouds are of hemp and, due to stretch, the lanyards had to be set up frequently. The two tackles are on the topmast shrouds. Below. The ship's bell



Mizzen fife rail and saddle for spanker boom. Left. Looking aloft along the foremast, showing size of foretop with its lubber holes near the mast. The windage of the rigging in a gale was tremendous

Too Many Yachtsmen

Round-the-World Voyages Becoming Too Plentiful for the South Sea Islanders

By ALFRED F. LOOMIS

THE time is the near future. The entire action of the playlet takes place on the South Pacific island of Raritari, well off the range of steamship traffic. The scene is laid outside the open door of a native palm leaf hut, from the eaves of which rainwater continuously drips. Although it is not visible, a portico of banana leaves may be imagined as covering the stage, since the stage is dry despite the falling rain. Any intelligent reader who saw the play "Rain" a few seasons ago may readily supply the remaining details, confident that he knows as much about South Pacific islands as does the present writer, who cares less.

As the curtain lifts, Phil, a very fat trader, barefoot, clad only in pajama bottom and sleeveless undershirt, sits in a wicker chair to the right of the door of the hut, drinking neat gin from a square bottle. Gin is the curse of the white man in the tropics, and Phil knows it. But he is temporarily out of brandy, and busted. Sadie, his wife, who is high-busted, stands beside him busily turning a punkah to keep the bar flies from settling on them both. The punkah is rightly an Indian implement, and has no place in a Polynesian scene, but the electricity has just been turned off, and Phil and Sadie are Mohammedans, if anything. Although thin, Sadie is very fond of her husband. She is suitably clad in clothes of the place and period.

Phil. Sadie?

Sadie. What?

Phil. I was just goin' to say that when the typhoon season sets in you won't have to be turnin' that fan no more.

Sadie. I know that, Phil, and it will be pretty peaceful on Raritari with the world passing us by.

Phil. That's right. The blind circumnavigator is the only one of them sailor fellers that's touched here in a coon's age.

Sadie. Well, I had a cable from Wombitoa Island this morning, saying that five Yale men in a yawl had fallen into the hands of the cannibals.

Phil (draws the cork of another bottle with his teeth and drinks deep). Lucky for us. I suppose the cannibals ate 'em.

Sadie. Say, who got this cable? All they did was cut off their left hands. Said single-handing it was the only way to circumnavigate these days.

Phil (laughing heartily). Ho ho ho! That certainly was a good joke on the college fellers. Didn't know the cannibals could wisecrack like that.

Sadie. Well, so long as they've got their right hands they're not so badly off. They can still write up the story of their cruise. Say, Phil, have you seen that *B'geeographic* feller lately?

Phil (yawning). Sure, he was around yesterday looking at my photographs. Picked out some of the best and said he was going to write captions for them. (Peers offstage.) Here he comes now.

Sadie (interested). Oh, I just love the *B'geeographic* captions, and I hope he'll read them to us before he sends them to his pamphlet.

(Offstage there are the sounds of a man stamping his feet and shaking an umbrella, and Ernest Hotso, a young, smooth-faced man enters. He is clad in a Palm Beach suit, neatly pressed, puggaree helmet, white silk socks, and buckskin shoes. He advances to the center, holding in one hand his mauve umbrella and in the other a sheaf of photographs. When standing before Phil, he lowers the umbrella to the floor and holds up a large photograph of a nude Polynesian woman, turning it slightly this way and that so that both Phil and Sadie may see it.)

Ernest. Hello, Phil. You don't mind if Mrs. Thomson sees this too, do you? It's for publication in a family magazine.

Sadie (hiding a yawn). It doesn't interest me, Mr. Hotso. I've got a mirror.

Ernest (blushing and speaking hurriedly as if afraid to face the thought implied by Sadie). No doubt, no doubt. But listen to the caption. (Reads.) "Since the settlement of the island of Wombitoa in 1842 the French have succeeded in laying 1435 miles of good roads. There are as yet no motor cars on the island, but in 1924 there were 3007 bicycles. The chief product of the island is cannibals." There. Isn't that vital?

Phil. What's that naked woman got to do with Wombitoa? I took the picture myself in Hollywood last time I was in the States.

Ernest (indignant). Does the caption say the woman is a native of Wombitoa? Now look at this one. (Holds up a picture of two kind-hearted, double-breasted Polynesian women, one in profile, the other facing the camera.) Isn't that esthetic? And here's the caption. (Reads.) "In January 1840 there may have been 2000 whites in New Zealand. By 1861 the number was still slightly under 100,000. During the next twenty years the gold discoveries, the public works expenditure, and the development of agriculture, multiplied the number of colonists five times to 498,000 in April 1881." That's impressive, eh? I copied it right out of the encyclopedia.

Sadie (approvingly). That's the proper style, Ernest. It keeps your mind on the picture.

Phil (irritated). What I want to know is, what's the picture got to do with the article? Aren't you writin' the autobiography of the blind navigator that's come halfway around the world in ninety days?

Ernest. Well, the readers aren't blind, are they? And the blind navigator sailed past New Zealand, didn't he? Haven't I got to say something about New Zealand in the captions?

Sadie. You're asking too many questions, Erny. Run along now and sell your pamphlets.

Ernest (haughtily). We don't sell them. All the readers of our periodical are members of the society.

(Exit Ernest. A tapping sound is now heard and Vasco Magellan, the blind circumnavigator, enters, feeling his way with the ferrule of his folded umbrella. He is a large man, with staring, sightless eyes and a bland expression on his open countenance. He goes straight to Phil's bottle of squareface and has a swig.)

Phil. Hello, Vasco. I bet you ain't any blinder 'n I am. I never saw anybody steer straighter to licker.

Vasco (with dignity). That's how I went blind. Now I use my sense of smell.

Sadie (giving the punkah a couple of extra tugs and laughing). If that's so it's a wonder you didn't pick up old Phil himself and empty him. But say, Vasco, I've been wondering how a blind man can get any fun out of sailing alone around the world.

Vasco (draws a wicker chair near to Phil and seats himself). Well, there's not so much to see at sea. You know, just water, and I don't like that. So I have my fun navigating by ear. I started out of Long Island Sound and wherever I could I've gone from one Sound to another. To a blind man all the Sounds are different, and if I don't hear them I take soundings. It all comes out in "Round the World on My Ear," the autobiography that Ernest is writing for me.

Phil (seriously). That listens all right for members of the society, but between friends how do you keep from bumpin' into things?

Vasco. I'll explain that too. You know, people say that the world's a pretty small place after all and folks keep bumping into each other? Well, that's a lie. There's plenty of water between continents for a small boat like mine. So when I was sailing southeast from America I kept the warm sun on my left cheek in the morning, hove to around noon for lunch, and kept it on my back in the afternoon. Then when I neared Africa I just kept on till I heard the lions roar and headed south till I came to the Cape, then east again till I reached this island.

Phil (winking at Sadie). Did you hear any pink elephants in Africa?

Vasco (unperturbed). No. Now you might think I'd get confused when I come to South America where there aren't any lions. But if I happened to hit the coast around Peru and headed north I'd soon get into hot water. So I'd turn south and pretty soon I'd come to Chile and the weather would be getting chillier all the time until I got right to the Horn. After I heard that I'd head north again. It seems like a big thing going around the world on your ear, but loneliness is really the worst part of it.

Sadie (reminiscently). I should think it would be grand out there in the great open spaces where there aren't any men to be men, or anything like that. (She sighs.)

(Vasco reaches unerringly for the gin bottle, but Phil, being older, is a little quicker and empties it at a gulp, likewise sighing gustily.)

"A tapping sound is now heard and Vasco Magellan, the blind circumnavigator, enters, feeling his way with the ferrule of his folded umbrella"

Phil. Well, anyway, Vasco, here's luck. I hear you're in line for the Blue Water Medal of the Cruising Club, and now that that boatload of Yale fellers has been stopped by the cannibals I don't see why you shouldn't cop it.

Vasco. Yes, I heard about them. But there's another gang of college boys sailing around the world backwards, and as they've all got Stanford U diplomas I'm pretty worried about 'em. Not to mention Richard Ballihooton.

Sadie. What? Is he loose again?

(Before Vasco can answer Sadie's surprised questions there is a "hoorah" offstage and a handsome young athlete, naked except for track shorts, rushes on. He strikes an attitude and holds a portable microphone to his lips. With a gesture of weariness Phil reaches under his wicker chair and produces another squareface.)

Phil (disgustedly). Ballihooton himself.

Ballihooton. Ladies and gentlemen of my unseen radio audience. We have now sailed in our ten-foot canoe four thousand miles to the island of Raritari, peopled only by the wildest savages, who at this moment menace my person with spears, krises, and boomerangs. One false step and I am a dead man. I wish you could be here to share my feelings of apprehension and to look around at the closing circle of hideous blacks, their filed teeth bared in anger, their powerful arms upraised. A spear flies and I — I — (Shuts off microphone and addresses himself conversationally to Phil.) That'll give them the jidders for a moment. How are you anyway, Phil? Haven't seen you since I swam around the world two years back.

Phil. So so. Not too lonely. Are you ackshelly sailing

around the world in a ten-foot canoe? Or is this a publicity stunt?

Ballihooton. Well, of course, I've chartered a big liner and I sail my canoe every day in a canvas tank on deck. But every time I come to port I launch it overside and sail up to the dock.

Sadie. Sounds almost unethical to me, Richard, but I suppose a famous explorer has to live.

Ballihooton. Wait. (Switches on the microphone and speaks into it.) That was a close squeak, boys and girls. The spear nicked my left ear and passed clean through the trunk of a banyan tree. Then by sheer force of will I demonstrated my Nordic supremacy over these savage blacks and they are now groveling before me, offering food and gifts as I prepare to sail on to the cannibal isle of Wombitoa. And tomorrow, on the Halifoam toothpaste hour, you will hear, God willing, of my further remarkable adventures. Goodbye, goodbye!

(Exit Ballihooton, with a wave to Phil and the other savages. Before the clatter of his departure has died away the stage is filled with a motley crew of amateur sailors, young and old, some with cameras and others with pads and pencils, all eagerly absorbing the exotic strangeness of the landscape. Their spokesman is a shaven-headed youth in white flannels, his sweater embroidered in blue with the name of his yacht.)

Spokesman. Bonjour, messieurs, madame. We are round-the-world voyagers, craving the hospitality of your island during the typhoon season and embracing the opportunity to write up our journals for the *New York Times.* Your harbor is filled with our yachts — cutters, sloops, yawls, ketches, and schooners — and if you can spare any masts, booms, planks, keels, rope, or standing rigging we need everything you've got. We salute you.

Phil (empties a bottle at a gulp). My God! Are you all round-the-world yachtsmen?

Spokesman (proudly). Yes, we sailed away to escape the depression and seek the relaxation of the blue sea — and have a try at the Blue Water Medal. But we are all specialists. The man on my right here, for instance, never touches the tiller of his flat-bottomed rowboat except with his big toes, and invariably handles sheets and halliards with his teeth. On my left is a boy in his teens who is making the first attempt to circumnavigate from south to north. That tall Scandinavian is hitchhiking from right to left. The group behind me have a Thames barge which they are sailing entirely under spinnaker and main topsail. We are all of us living embodiments of the fact that the pioneer blood is not running thin and that blue water sailing is not a lost art.

Phil. Glug glug. Wh-who is that little Frenchman with a woman on his arm and half a dozen small boys clinging to her skirts?

Spokesman. That? The one sailor among us who has no trouble with his crew. They have a maternity hospital on board their schooner, and instead of losing a boy at every port his wife presents him with a new one. Six years ago they started on their honeymoon around the world, and now they have a crew of ten.

(Shuddering, Phil lifts himself from his chair and looks around and finds his umbrella. He starts offstage but stops at the eaves trough and soaks his head under the steady stream of rainwater from the roof of the hut. He straightens up and turns around, beckoning Sadie.)

Phil. Come, Sadie. We'll go home and build a shack on the Chesapeake where we can get away from it all. Too many yachtsmen hereabouts.

Sadie (relinquishes the punkah and follows Phil slowly, her fascinated gaze on the Frenchman's wife). What a woman!

(Exit Phil and Sadie. Ernest Hotso suddenly bustles in, photograph portfolio under one arm, subscription book in hand. He walks to the center of the stage.)

Ernest (briskly). Well, lady, gentlemen, and kiddies, I have a little novelty here that will interest one and all. A three-year membership in the B'geeographic Association for only eight dollars, Mex. Read all about the adventures of Vasco Magellan, the only blind single-handed circumnavigator, whose autobiography appears monthly in our illustrated pamphlet. (He holds up a photograph of three nude Polynesian women, standing in as many athletic poses.) Those of you who cannot read will surely love the pictures.

Spokesman (disregarding the picture). What! A blind sailor cruising alone around the world!

Ernest. There he is, in person. (Points to Vasco who has smelled his way to a case of gin and is oblivious to his surroundings.)

Spokesman (frantic). Lynch him, boys! He's turning the sport of yachting into a racket!

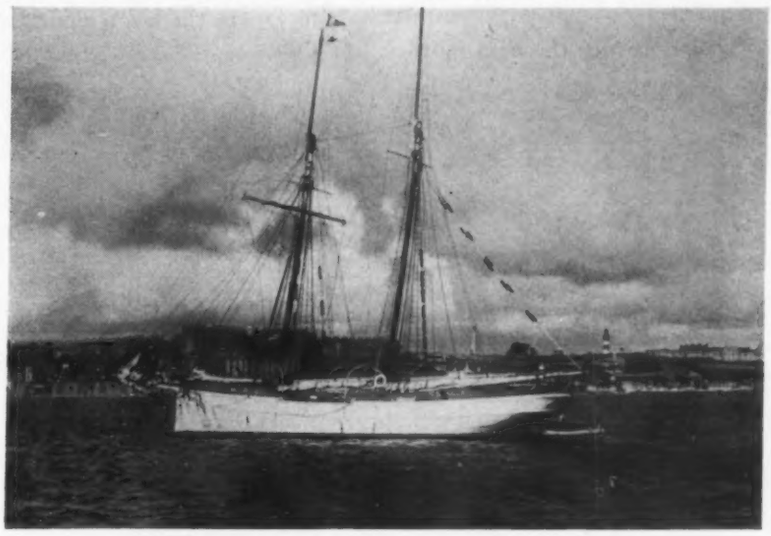
(They fall upon Vasco Magellan in a savage burst of rage and kick and pummel him. The approaching typhoon soughs and sighs in the breadfruit forest and rain falls with doubled intensity. Quick curtain.)

Heart-Break Passage

Illustrating How a Hazardous Situation May Arise from Uncertainties in Navigation

By WARWICK M. TOMPKINS

EVERYTHING that happens to a ship is her master's fault and his alone. This is a rule as old as ships, as hard as rock and as unyielding. With the privilege of command goes this heavy burden, a sense of final, inescapable responsibility. When disaster occurs the weight must be heavy indeed, but it is almost as oppressive when catastrophe has been avoided by that aegis of luck, skill and fortuitous happening which so often saves blundering humanity.



"Wander Bird" anchored in Plymouth Harbor, England

I was overly proud and the just gods chastened me as you shall see. I have had a hard lesson. It has been well-learned, I hope, and I write of it so that others even less conversant with the sea may take timely warning and not forget that the ocean tolerates our excursions only so long as we are ever vigilant, careful, and aware of our manifold human frailties.

We expected a hard passage when we sailed from Miami. Sometimes circumstances force a ship to sea when her gear is too worn, her crew too small, her larder too nearly bare. The crew of three that beat for three days through baffling winds to Nassau was reinforced there by another hand, but it was with literally rotten canvas (barring new jibs), scanty food and, as it proved later, unreliable chronometers that we put to sea on April 20th, 1931, from Nassau, Boston bound.

All three chronometers had been jarred in the same way and to the same extent a month before when a sudden squall had caught the ship and hove her down hard. A rod, which had always held the instruments securely before, gave way and I found the watches riding serenely face upwards in their gimbals although their cases had been tipped 90 degrees and were lying on their backs instead of standing on their bottoms.

This mishap worried me considerably until the following morning when I wrote up my chronometer log and discovered that the instruments were maintaining apparently undisturbed rates. They continued doing so for a month and, undisturbed, I neglected to check them against another source until the day we left Miami. Then, when a check showed all three instruments to be six minutes off, I concluded that either I had made an error or that my stop-watch had gone wrong. It certainly seemed highly improbable that three expensive timepieces would all go off on a crazy tangent at once and so uniformly that a most careful day-by-day log would not reveal the fact. My radio, incidentally, was not working despite much expensive overhauling by shore experts who never succeeded in resuscitating it for more than a day or two at a time. Radio still seems to be a snare and a delusion aboard a small ship, if I may digress enough to say so. This failure may be due to poor operation, or more likely, a result of salt air, but I am told that sets are made specially for these conditions and that there is one designed for time signals alone which has proved satisfactory. It is high time that a reliable radio was made available to offshore cruisers. With a proper set, our troubles would have been avoided.

A prime vertical sight of the sun, made the following day when we had fixed our position exactly by bearings on Great Isaacs Light, proved that the chronometers were some six minutes off, all three of them being slow about that amount. So, during a short stay in Nassau, we got several checks from steamers, the results indicating that the watches had settled down to very nearly their old rates after having lost very rapidly and uniformly sometime during the past month.

We put to sea again with many things to worry us besides the watches. Our threadbare sails would have to be nursed day and night if they were to get us to Boston. The alleged cook we had shipped was proving utterly worthless. The business outlook for 1931 was none too cheerful, as some others may recall.

Six days out found me concerned about our time, and we started looking for steamers. Towards six o'clock we sighted a southbound vessel which we would pass close aboard. The large ensign, over the international code pennant, was at once set at the main truck and the topsail struck so that the signal could be easily seen. We ran "GU" — Will you please give me a chronometer check? — to the end of our square yard.

Although the two ships converged rapidly the steamer gave no sign of having seen us. Twice we changed course, forcing her to give way to keep clear. Eventually, to our amazement, she thudded past within a hundred yards, her officers lounging in the bridge wings studying us through their binoculars.

"GU" is a two-flag signal. Two-flag signals are classed as URGENT in every international signal book in the world, and yet the watch officer of that steamer knew so little of common decency, let alone exacting sea

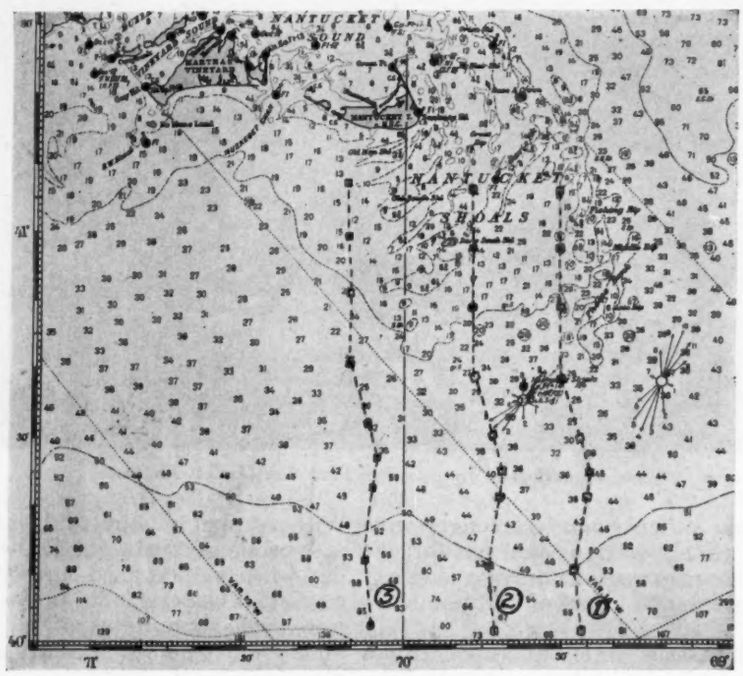
etiquette, that he dared in broad daylight deliberately ignore a very real appeal for aid.

Our noon position that day put us just east of the Stream and a trifle south of Hatteras. This was east of our D.R., which was uncertain in view of much calm, leeway made under short sail, the Stream and other variables, but the course of the steamer seemed to indicate that our sights were not far wrong.

"She must have just come out of the Stream after cutting across from Hatteras," I reasoned. So we set the spinnaker to the southerly breeze, changed our course a point to the westward to pick up Diamond Shoals Lightship the next day, and went rolling along through a misty night.

Land was sighted dead ahead at 5.10 the next morning. We were doing seven knots and had no idea the coast was within 40 miles. In the rush to get about the spinnaker was handled more swiftly than carefully. It fell overboard, filled and snapped the lithe spruce pole. We salvaged the sail intact and jibed.

The coast was low and sandy, covered with furze, undistinguished by landmarks. It had to be Hatteras, we thought, so we stood along the shore hoping to pick up the light on the port bow. But in a few minutes we saw more land to starboard and also right ahead. We were in a cul-de-sac.



Possible courses approaching Nantucket with nearly similar soundings

At this trying juncture we also saw simultaneously what seemed to be a tall and graceful lighthouse to port and an approaching Coast Guard 75-footer. The only light anywhere for a hundred miles which even faintly resembled the tower seen dimly through the shredding morning mists was that at Hatteras, but the coastline in no way, except general unattractiveness, agreed with the charted details of America's most notorious cape. Had it not been for the light we would have identified the land as Cape Lookout, but that cape bears no such noble tower as the one we saw.

The Coast Guardsmen enlightened us in a semaphore chat. The land *was* Cape Lookout, and the "light" an imposing factory chimney in Beaufort. These Coast Guard boats carry no chronometers so we were unable to get a check. Weather conditions were also against us and we got no sights. There was nothing to do but come about and get to sea. After six hours of beating to windward we rounded the lightship.

It is a comparatively short run from Cape Lookout to Nantucket. We had a fine fair breeze which we thought would hold — heaven knows we had had bad enough luck so far to let us think it might! — and I thought we could safely continue with dead reckoning and meridian altitudes. And surely we would meet other steamers. The chronometers, obviously, were entirely crazy. We should have been in mid-Stream at the moment we picked up land that morning.

Our fine, fair wind lasted just six hours. Then it went flat long enough to let the mainsail slat once. That rotten rag forthwith blew to glory. The remnants were carefully salvaged, however, because it looked as though we might be able to repair the strips above the second reefband if our patience, sail twine and fingers held out long enough. We put the storm trysail on the main and were just concluding that job when the foresail slatted — there was a nasty sea running — ripped from boom to gaff vertically and then tore horizontally from the middle out to the leech along the gaff. The wind thereupon died entirely, leaving us rolling heavily, with the ship at the mercy of the Stream and our crew on the verge of tears.

We sewed and we sewed, stopping only to take advantage of every shift of the fickle winds, and after two days of steady work we flung a double-reefed mainsail to the wind. The trysail went on the foremast and the *Bird* started to move once more. We tackled the foresail, unlaying fishing line to make twine and noting that the bolt rope of the forestaysail had started to go. This last affliction we dismissed with a choice selection of rare Old English adjectives.

Of course our D.R. was by now practically worthless. And we were unable to attract the attention of steamers even though we rigged up a heliograph when flag hoists failed. At night when we stood by with flares or the Very pistol the ocean was void of ships.

Meanwhile the log is full of such entries as these culled at random from a four-day period:

"4 A.M. Sting gone out of wind. Split foresail. . . . Noon. Took in mainsail to jibe. Reset mainsail. . . . 6 P.M. Lowered mainsail for repairs. Set trysail. . . . 9 P.M. Reset mainsail. Started repairs on foresail by lantern light. . . . 11 P.M. Lowered main to prevent slatting. . . . 2 A.M. (second day) Heavy slat starts four mainsail seams. Lowered for repairs. 7 A.M. Foresail repaired and rebent. Mainsail repaired, reset. . . . 9 A.M. (the third day) Spinnaker set as balloon jib, carried away in heavy, sudden squall half an hour later. . . . 11 A.M. Outer jib pennant carries away. Sail doused. . . . Midnight. Wind still moderating. All sting gone."

To which last remark is appended, "Oh yeah? Mainsail split. Lowered remnants. Hove-to."

But we shall eliminate the fourth of these miserable days. We discovered on that date that we had lost ten hard-won miles while hove-to and we had a feeling that we were going to make a landfall on the Irish Coast. Also, it had grown very cold.

We were ten days out of Nassau and by account almost due south of Nantucket Lightship when we eventually halted — with a Very star — a diminutive freighter which seemed bound nowhere in particular and was in no hurry to get there. I held a long blinker conversation with someone on her bridge whose Morse was rudimentary in the extreme. He finally gathered I wanted something, however, and reported our approximate position as 69–14 W., 38–38 N. Thus we had another position to plot along with three or four other "possible positions."

This was east of even our easternmost "possible," and as it turned out I was more than justified in not taking our latest advice seriously. The steamer looked like a liquor carrier and I suspected from her leisurely, ambling gait that she might just be standing on and off without an accurate idea of her position. An observation of Polaris an hour after we had left the steamer put us 25 miles south of her latitude, so I forgot about her information, considering that "approximate" had been quite the correct word for her to use. We put the ship on a N.E.xN. course to further ensure clearing Nantucket nicely and sailed northward.

On May first, after endless, patient calculating, we decided we were in the vicinity of 38–36 N. 69–03 W. with Nantucket Lightship bearing 348 true, distant 128 miles. Quite probably we were somewhat east of this position, I thought, but since there was no way of checking up one way or another there was nothing to do but go ahead, using every precaution.

We had left the Stream and plunged into dismal rain and fog. Steamers were heard but none was seen. The wind was light but freshening out of the southeast, and our course was set just four degrees west of true north because the more we thought about it the more reasonable did it seem to suppose we had been set well to the eastward.

At noon, May 2nd, we broke out our 14-pound deep sea lead with its 125 fathoms of braided line coiled in a big tub. Every hour we rounded up, got way off the ship and hove the lead, first passing it forward outside everything to the jibboom end and then sweating it in again by hand, a wet and tedious job even under the happiest circumstances.

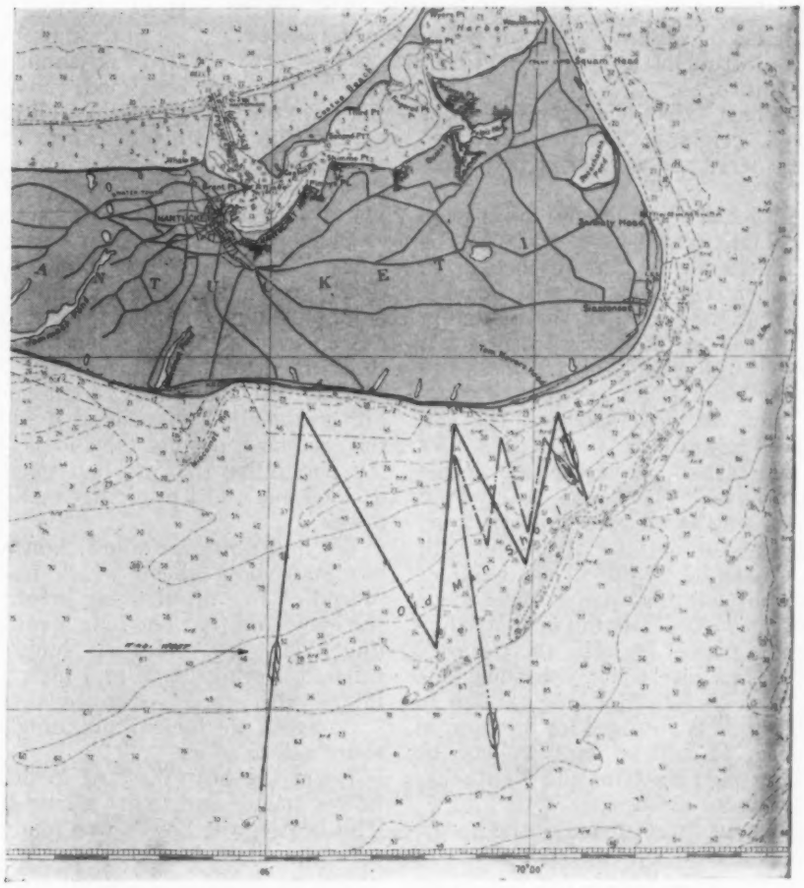
We got no bottom at 75 fathoms on the first three soundings, but we came to realize that there was bound to be a possibly large and certainly undeterminable error in such soundings as we would get at any depth approaching this. Even with the ship hove-to the drift was sufficient to carry the big line out in such a wide arc that the depth of the lead at any time was extremely problematical. Nevertheless, it was the best rig we had and it was much better than that carried by the usual yacht which has nothing at all of this nature.

At four o'clock we got bottom at 70 fathoms. It was a sticky bottom which swallowed the lead. The line grew taut, held for a second and then snapped! It was new line which had been used but a few times the previous season and then on much shallower soundings. Insidious mildew had attacked the unused portion of the line and rotted it completely.

That mishap had grave results. Had the lead come home we should have found green mud on the arming, and, barring one very small patch, all the green mud thereabouts is west of a north and south line running through the lightship. Green mud would have given us a warning of the dangers we were standing into and would have sent us kiting still further off to the eastward. As it was, we had only a depth of 70 fathoms which coincided with our idea of our position and we went sailing on into the night a bit more confident that we were right and safe. With another lead and a long line compounded of quarter-inch manila and a spare log line, hastily marked off, we continued feeling for the bottom.

The chart shows plainly that soundings are apt to be hard to interpret off Nantucket. For 150 miles east of the lightship the great subsurface plain is so smoothly, gently rolling that even a long line of soundings made in one part of it is apt to fit quite well in another.

So, in a sailing ship which needed to make port quickly, with fitful breezes, it was not practicable to run either very long or very widely diverse courses. We didn't want to go to the west, naturally, and there seemed no great advantage in running east when for more than a hundred miles we would get the same soundings as we would if we continued running north. So we ran a 50-mile line of soundings, nine of which are shown plotted in the chart herewith. We carefully collected samples of the bottom in each case and as carefully plotted the courses steered and the spacing of the soundings on tracing paper.



"Wander Bird" was embayed between Nantucket and Old Man Shoal

Meanwhile, as ugly a night as I have ever spent at sea wore interminably on, our six-hour watches seeming never to end. Rain fell through the fog. We sailed in a dimensionless blackness, blind, with ears only to guide us. The ears seemed to be of great value.

Three steamers — but no lightship — were heard plainly. One was apparently crossing our track at right angles. This was about 1:00 A.M. and it seemed to check up our belief that we had passed the lightship several hours earlier. The other whistles, however, seemed well to the westward and on courses paralleling our own. On such a miserable night it seemed incredible that steamers would be inside the lightship. And since we were east of these fellows we must be well to the east of the lightship. So, again reassured in our opinion that we were safe, we ran on.

The glass was sliding slowly downward. For eighteen hours there had been no check in the steady drop, and now, at 4:00 A.M., the slender hand began that heart-like pulsing which almost invariably precedes heavy weather. The wind was hauling, too. There is a standard examination question for American naval officers. It is this: What is the proper course to pursue when on soundings in a fog? And the correct answer is *Anchor*. All very well for ships with steam capstans, and miles of chain. Not so good for a crew of four with a 500-pound anchor, seven-eighths-inch stud link chain, an old-fashioned barrel windlass, 30 fathoms of water underfoot and every indication of a blow in the immediate future.

A handy pressure sounding recorder with lead jacket and reel

So I leaned over the chart table, sliding my plotted soundings hither and yon, weighing all of the many factors which had to be considered and wondering just what we ought to do.

There were just two lines of charted soundings anywhere near Nantucket Light which agreed with those we had taken. Depths and kinds of bottom checked in each instance and in either case our true north course was safe. One line ran four miles east of the lightship, the other six or seven miles to the westward of it. If we were east — as we could reasonably suppose we were — we were perfectly clear. If we were to the westward we might have seen, in clear weather, the can buoy on Davis Shoal. Westward we would pass over several shoal spots which had, nevertheless, ample water for us, and in any case there was nothing on which to come to grief as long as we headed north, true.

Since then I have learned something about the Gulf Stream. During the Transatlantic Race last summer *Wander Bird* went current hunting with everyone but *Dorade*, *Skäl* and *Amberjack*. And, barring one day during a week when we could expect big sets, there wasn't any Stream at all! On that day the mysterious blue Atlantic river roused from its lethargy long enough to give us 48 miles of easting. It is not hard for me now, in view of that occurrence, to believe that we got no set at all, or very little, between Hatteras and Nantucket during the passage now under discussion.

And I have pondered about those steamers and acoustics in fogs. Have you ever read, on the back of one of our pilot charts, about the sailor looking for Execution Light one foggy night? Well, neither seeing the light nor hearing the horn, this prudent lad anchored and waited for clearer weather. Morning came and he found himself within *three hundred yards* of that famous, squatty light. The horn had been bellowing all night, too. Such instances of fog blanketing sound are not rare. I wonder if the steamers we heard so clearly to port may not have been, actually, to starboard or ahead or astern or possibly miles and miles away?

"Land ho! All hands on deck!" Again unsuspected danger ahead detected by a wide-awake lookout. It was Sunday, May 3rd, and we were thirteen days out of Nassau with provisions running short and the galley stove running on the last pieces of the broken spinnaker boom.

There it was, low, yellow beach running due east and west right across our path. Not a thing more enlightening than a big red barn was to be seen through the fog.

We tacked at once and started due south, bent on retracing our course to safety. What land was it? Why hadn't our soundings given us some inkling of its presence?

Probably it was Nantucket. The south shore of that island runs east and west and is low, sandy and practically uninhabited. If it were Nantucket we were 25 miles west of our westernmost line of soundings and 35 miles west of our "most probable" position.

But it might be Martha's Vineyard! If we could be 35 miles wrong might we not almost as well be 55 miles in error? With all the time we had been becalmed, hove-to and subject to unknown currents it might well be so.

Then the fog started to lift. The sun came through, warming things up and promising a good day, after all. In clear weather we could follow the shore of either island with impunity, seeking identification, so again we came about and headed north.

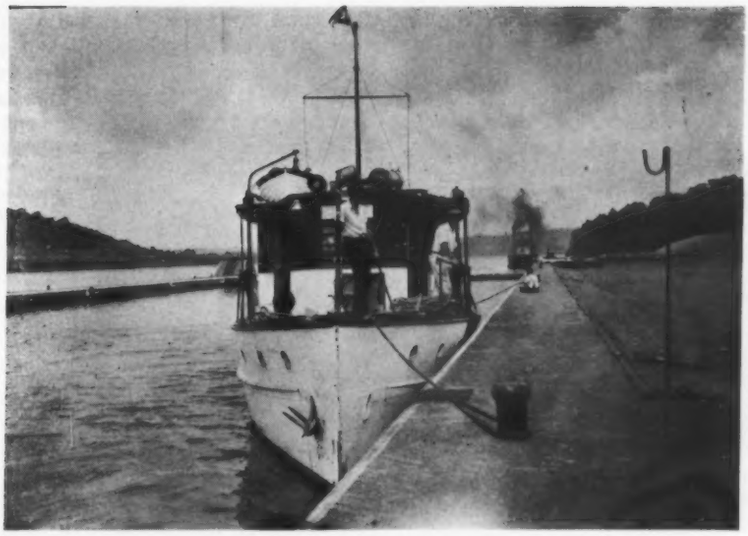
We raised the beach soon, but the fog was lifting slowly and no landmarks had yet appeared. The red barn looked utterly deserted and forgotten. The ship was close to the beach when the mist, without warning, shut in thicker than before and blotted out the coast entirely. We could hear the monody of the surf plainly. For a moment I considered stealing along the shore to the eastward, despite the shoals that lay that way, but the possibility that we had raised Martha's Vineyard decided me, and I prudently tacked and stood out again to sea.

We had not gone more than a mile or two when I saw something ahead which made me feel very sick indeed. A line of creaming breakers stretched as far as the eye could see. The long, even rollers, so oily smooth under the fog, were suddenly growing enormously taller, towering black and high and straight and then falling with a crash over obviously shoal water.

So again we tacked, standing in blindly toward the shore astern of us.

I sent the boys forward to shackle on the starboard bower anchor and to get a long scope of chain on deck. The heavy port bower was ready to let go, but we got up more chain for that, too. When we heard the surf ahead we tacked and stood south again until we saw

(*Continued on page 110*)



"Abadab" in an Ohio River lock on the way up the river to Cincinnati from New Orleans

Cruise of the "Abadab"

Part II—Up the Mississippi and the Ohio from New Orleans to Cincinnati

By CAPT. L. A. BAIER

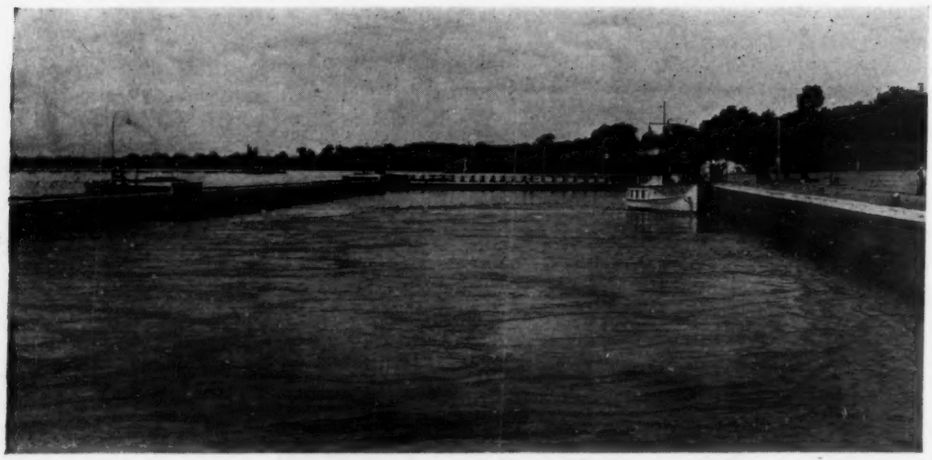
ABADAB departed from New Orleans on July 14th and ran out of the canal, heading E. by N. about four miles to the entrance of the Inner Harbor Navigation Canal. This canal, crossed by four drawbridges, has a depth of nine feet at the lake entrance, to thirty feet at the river end, but is full of driftwood and logs, which necessitated running at one-bell speed for a good share of the time. The large lock, about 640 by 75 feet, is located near the river end and a fee of five dollars was charged for passage. The distance through the canal is about five miles in a southerly direction. Shortly after leaving the lock, the end of the canal hove in sight and, swinging to starboard, we entered the Mississippi River for the long run upstream.

While not as wide as we expected, the river had well-defined banks and was comparatively free from driftwood, causing us to feel that, aside from the dark muddy color, it was like any other river and perhaps not as difficult to navigate as we had been led to expect. As we plugged steadily upstream, with occasional rain, the southeast wind increased in strength, and by afternoon was kicking up quite a sea against the current. Donaldsonville, on the port bank, was reached at nightfall and here we looked in vain for a safe anchorage or wharf to moor for the night. It was growing dark, with increasing wind, so we moved upstream a few miles and anchored above 81-mile point, on the starboard bank, close in the lee of the shore. The lead showed ten fathoms, and, when we had to heave in cable later on, some caustic remarks about shoals were made. During the night the glass fell rapidly and there was heavy rain, and at 2:30 A.M. the second anchor was dropped with plenty of scope.

The next day, which brought a howling 50-mile gale, was spent at anchor. At noon the barometer stopped its fall and at 9:00 P.M., with a rising glass, the rain and wind eased to some extent. The previous day's run was 96 miles at an average speed of 7.61 miles. (All subsequent mileage is given in river or statute miles and speeds in miles per hour rather than in knots.)

During the day yarns were swapped and Mac had many interesting tales concerning the previous owner of *Abadab*. It seems that he was a retired New Yorker and up to the time of his death, when over eighty years of age, was an avid fisherman, maintaining a fleet of boats at Miami and another on Long Island Sound with a large crew employed solely in bait catching and the handling of the boats. His weakness when in Miami was bone fishing, and Mac said he always kept at hand an extra pole fitted only with a lead sinker, which was used to cast at any other type of fish that attempted to take the bait on his troll line. Many a curious mackerel or other fish not belonging to the bone fish lineage received a tap on the nose with that sinker while inspecting the forbidden bait. Mac's job was to keep shrimp on hand and he always had to display many samples before the bait was decided upon. If a shrimp didn't show the proper spirit by jumping at least eight inches upon being flicked with the finger, the "boss" ordered a new supply on deck. He confided to Mac one evening that, if there was anything in the idea of reincarnation, he hoped to return to this earth in the form of a mackerel gull, or tern, whose graceful diving for fish he greatly admired.

On July 16th, after an hour's hard work in the light rain, we finally got both anchors on deck and proceeded. The owner had supplied us with U. S. Army Engineers' charts of the river, but unfortunately the investment proved worthless as an aid to navigation. The charts were dated 1916, and carried no later corrections, and in many places we found the river located miles from the charted position. We had obtained a small outline chart photostated from the river pilots' penciled work charts. On this chart were located the shore beacons, with a dotted line indicating the channel. I had observed these markers, in the form of a pair of white crossed boards on



The Ohio River has been improved with modern canals and its depths are carefully controlled by a system of dams which hold water in reserve for the dry season

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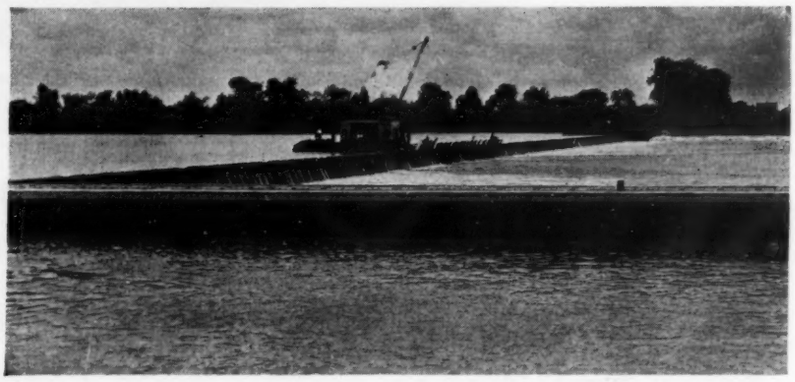
Floating derricks raise and lower wickets in the dams to control the water levels



a tripod, lighted and numbered, but had been unable to locate them on the government charts. On the small scale pilot chart these beacons were all named. As the chart did not show the respective numbers, it was often difficult to identify the particular marker which we were passing. As each beacon was abeam I inserted its number on the chart, and, except for cases where extra beacons had been added, or others discontinued, made out quite well. These beacons, installed by the U. S. Army Engineers and kept lighted by local fishermen or farmers, in a general way act as ranges for the channel and are shifted from time to time in accordance with changes in the river's course. The channel is continually crossing and recrossing the river, and of course cannot be detected by any difference in the color of the water. The markers are mounted on stands, trees, barns, etc., and often they are so well hidden in the brush that picking up the next beacon becomes quite a game. As a rule, the channel follows the outside of the bend, but the crossings are continually shifting and require constant use of the lead to locate.

Below Baton Rouge the channel is quite deep and easily followed. Large oil tankers and other seagoing steamers can navigate this stretch and a deeply ballasted tanker coming downstream was passed in the afternoon.

Baton Rouge was reached at 2:15 P.M. Expecting the usual waterfront piers and wharfs, we were disappointed in finding only high-sided pile landings for the oil tankers. We finally located a scow moored to the levee behind which the town was hidden, and made our landing alongside. In fact, all along the river the levees hid all signs of towns and the only indications of settlements were the tall church spires visible above the banks.

Mac hurried uptown to order fuel oil and in a short time a truck dumped a drum of oil in the mud at the foot of the levee. It was necessary to parbuckle the drum up a plank on to the scow and then handpump the oil into our tanks. Two boys, lounging on the scow, pitched in on the job, and we soon had our oil and supplies on board. The boys, Lee and Elton, had run away from their homes in Houston, Texas, and were heading for Chicago. They were pretty well bedraggled, having just spent a night in jail, and jumped at my offer that they work their way up the river. It was apparent that we could not get along without a crew under the conditions encountered, and Lee claimed he could cook, which settled the matter. Getting underway at 5:20 P.M. we passed Scot Bluffs and anchored off the eastern end of Profit Island, with 68 miles behind us that day.

The days that followed were occupied with a constant struggle against that implacable, muddy, surging body of water, changeable in mood, ever sinister and untamed. The heat was intense and unrelieved by the violent squalls and severe thunder storms that made up each afternoon until we reached Memphis. Logs and driftwood made eternal vigilance at the wheel a necessity. Large trees, with the heavier roots dragging out of sight and only the tips of the branches visible, were a constant source of worry. The water seemed to grow muddier as we advanced until its surface was lined with cracks similar to those in a sunbaked mud flat. The monotonous banks and levees, the never-ending curves, loops, bends and contortions that shut out the prospects ahead, and the infrequent meetings with other vessels induced a feeling of impotence in the struggle for mileage. I learned to pick the channel by studying the actions of the oncoming drift, the tell-tale break of our wash astern, and the contours of the banks, but the lead line was kept in constant use as our main guide. On the large tows, often four hands, two on each side, were employed in continuous soundings, the depths being relayed aft by others to the pilothouse on the steamer. Although the tows ran all night, our speed during the day was about double theirs, so that we passed and repassed the same outfit sometimes for several days. We learned later that the owner in Cincinnati was receiving daily wireless reports from these lines concerning our progress up the river.

A large island has been formed by the river at Palmyra and at the lower junction of the two arms enormous boils were formed. These boils became more

common as we proceeded upstream but were particularly vicious at this place. The present channel is up the shorter port hand branch.

Vicksburg, located on the bluffs at the junction of the Mississippi and Yazoo Rivers, is the terminal for much of the river traffic and the levees were lined with stern-wheelers of all descriptions. Each landing presented the same problem of getting oil and water down the levees. At Vicksburg, for example, it was necessary to pack the oil down to the boat in 5-gallon cans. Water was sometimes obtained at the river ferry landings. The managers of the ferry companies were invariably courteous and often aided us in getting fuel and supplies delivered down the levees.

Greenville proved to be an attractive town with a small park on top of the levee. The next 70 miles above Greenville are twisted into abnormally crooked curves and bends, and after traveling six hours upstream the tall transmission towers at Greenville were still visible a few miles in an airline astern.

On July 23rd the barometer dropped to 29.58 and a storm broke the heat temporarily. The strong wind carried the sand off the bars and it fell like snow. We dropped two anchors for the night. At Australia Landing the pump vanes jammed and carried away the shaft coupling. The vanes in the rotary pump had been ground down by the sand in the water and caught in the valve ports. Shims were soldered to the vanes and a new coupling improvised from pipe fittings. The only suitable circulating water pump for river work appears to be the simple plunger type, which is not affected so much by the grit and sand.

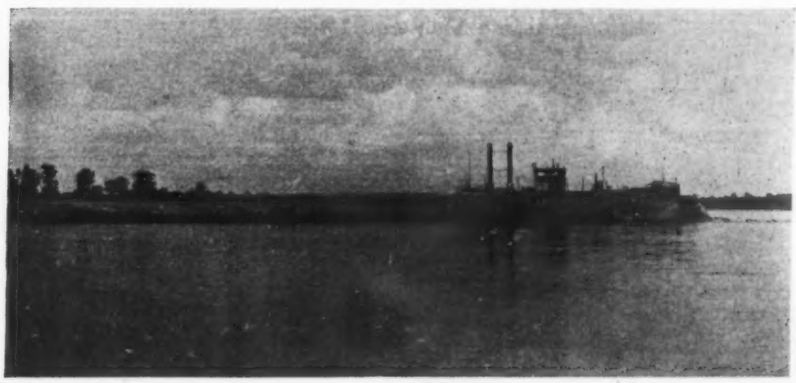
Next morning we started upstream at 8:10 A.M. but had to anchor immediately due to the vanes fouling again. Mac and Lee took the entire pump off and went ashore in the tender to a woodcutter's camp downstream. Hiking three miles inland through the swamps to Clarksdale, they hired a car to carry them to Rosedale where new vanes were fitted. Heavy rain and squalls occurred all day and at 7:00 P.M. we sighted the boys returning. Their engine broke down about a mile below us and Lee went overboard and towed the tender upstream in the shallow water, with Mac sitting in the sternsheets, cussing the rain and needing only the Volga boat song to complete the picture.

Saturday, July 25th, we got underway early and at 11:45 hit on Queen City bar, off Island No. 66. We had been holding for Upper Queen City Bar beacon which had not yet been removed and noticed too late the new beacon on the opposite side of the river. Just as we hit, a heavy squall broke and laid us down on our beam ends broadside to the strong current. Tom White, a giant colored farmer, came to our assistance in his bateau and aided us in getting an anchor planted in the deep water to port. Heaving taut with the windlass in the heavy rain, we wiggled the boat by means of the engine and rudder and after four hours of exhausting work cut our way through the bar into deep water. The intake pipe was clogged solid with sand, necessitating an hour's work of cleaning out and reassembling. Towing Tom's boat alongside we ran up toward his home on the head of the island. His "missus" and kids were standing in front of the cabin in the rain watching us come in and Tom asked me to let him steer, whereupon he wheeled us up the channel, proud as a peacock, under the family's admiring gaze. We anchored for the night off Island No. 64, with only 33 miles logged for the day.

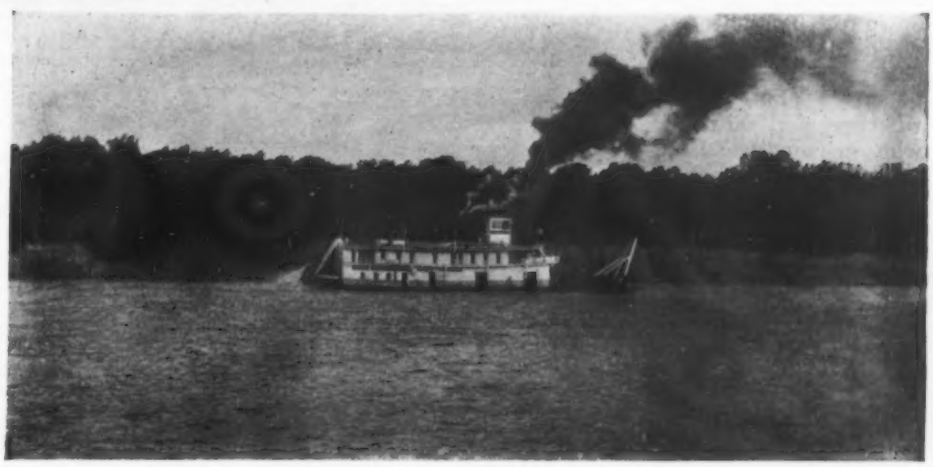
Tuesday, July 28th, we spent tied up at Captain Daniels' wharf boat, repacking valves and installing a new coupling. New vanes were ordered shipped to Cairo by airmail. Captain Daniels proved a genial host. He boasted a trained pet rooster, "Old Bill," eleven years old and locally famous. Intelligent as a bull dog, "Old Bill" ruled that part of the waterfront. The captain planted himself in one of our wicker chairs under the after awning, with "Old Bill" fussing around on deck, and spun yarns of the river and its tricks.

Next morning, after taking on water, we got underway at 9:50 A.M. but had to anchor off Redman Bar to work on the pump again. Late in the afternoon we passed through the extremely bad shoals and cuts below Island No. 35. Numerous dredges were working here on the channel

(*Continued on page 114*)



The "Slack Barrett," a typical stern-wheeler, with a tow of oil barges



A "snag boat" on the Mississippi near Vicksburg. These boats are kept busy clearing the channel of the continual deposits of trees, branches and other obstructions

At Menemsha Pond, right under the shoulder of Gay Head

Harbors

By ALFRED STUART MYERS

Drawings by David Moffat Myers

I like to think of little ports
With little ships at rest,
And gentle breezes whispering
From out the darkening west;

The crescent moon a-glimmering
Where sky and shoreline meet,
And winking little riding lights
Out there among the fleet.

THROUGHOUT the day's run every yachtsman has in mind the pleasant vision of some port far ahead in the hazy distance — a peaceful harbor where he will cast anchor and get snugged down for the night.

This lure of the harbor is no respecter of persons. You feel it whether you are one who personally drops anchor by hand from a narrow forward deck, or whether you sit at ease on a spacious after deck and listen to the musical rattle of chain through the hawse-hole.

But there are harbors — and harbors. Some are large and imposing; others are small and friendly. Some attract by their convenience; others win by their charm. Some are just places to anchor in; others are places with which to become intimately acquainted. Most harbors are pleasant; there are some that linger in memory through the long winter and beckon as soon as the yacht takes the water again.

The waterfront of Edgartown is a pleasant place

There's Menemsha Pond, for example, right under the shoulder of Gay Head, with a narrow channel opening on Vineyard Sound. The government dredged out that harbor at the request of swordfishermen and lobstermen who sail the waters of Nomans Land, southwest of the Vineyard.

Often they strike very dirty weather out there. The bones of many a good craft are piled up on "The Graveyard," northwest of Gay Head, where boulders crouch, vicious currents swirl, and thick, gray fog shuts down fast. But now, given half a chance, fishermen can make Menemsha Pond in time and laugh at the worst storm that ever blew.

It's a snug port, fair weather or foul. When you drop anchor there, you have pleasant company — generally some of these deep-sea fishermen, and sometimes yachtsmen who have "discovered" Menemsha Pond. The harbor's large enough to be comfortable, and small enough to be "homey." To allow extra room, piles have been sunk where the fishermen can moor, bow and stern, and so avoid taking up unnecessary space in swinging to an anchor. Along the shore are picturesque shacks with piers alongside where fishing vessels tie up. On the sandy beach and over the dune grass you see gray nets spread out to dry. And you have the moors of the Vineyard to roam for variety, Gay Head Light to visit, a magnificent sea view through 360 points of the compass from the high bluff at the Island's tip. You *may* have the good fortune to happen on the one remaining moor hen which is said still to roam Martha's Vineyard. If legend is anywhere near right as to this bird's age, you'll find it with white whiskers and tottering along on a cane.

Over at the opposite end of Martha's Vineyard is Edgartown. It is well known to many yachtsmen, yet the charm of this place is too elusive to be seized by any who make the harbor merely an overnight port of call. Edgartown has its own pert little lighthouse, out at the tip end of a long jetty. It makes a wonderful landmark to get your bearings by. The very shape of the harbor is refreshingly different, and it makes up in length what it lacks in breadth.

(*Continued on page 110*)

The harbor at Menemsha is large enough to be comfortable and small enough to be "homey"

At Edgartown, where the swordfishermen come and go

"Maitenes II" in the Fastnet Race

An Account of Her Ill-Fated Passage Last Summer

By L. LUARD

THOUGH there was a record entry list for last year's Fastnet Race, and though the leading ships completed the course in record time, the loss of Colonel Hudson, part owner of *Maitenes II*, was a tragedy about which it is difficult to write. "But the Fastnet Race had, like other sports," a friend said afterwards, "to claim sometime its first victim, and in course of time it will doubtless claim others. The sea, like war, prefers the best."

The last sentence is a true epitaph. The sea, like war, claims the best. Friendship, devotion, loyalty, were his only watchwords: his loss is, more than ever, our loss.

The crew of *Maitenes* numbered nine, all told — eight amateurs, and a young paid hand who had crossed the Atlantic with us a month before and had proved of sterling worth. Moreover, we still had aboard two young American amateurs who also crewed in that ocean race, knew the ship from truck to keelson, and were able seamen. But all were able seamen; all had participated in ocean races before. *Maitenes*, in this race, had a stronger crew than in the Transatlantic Race, was manned, without doubt, by a crew as good as any she had seen — if not better.

Small wonder, then, that we felt elated. The weather was fair, our time allowance good, our position in the fleet difficult to better; for shortly after rounding St. Catherine's Point, and before dark completely circumscribed vision, we sighted what appeared to be *Patience* and *Highland Light* standing in from seaward — astern. Though hard pressed by *Dorade*, we were apparently leading the fleet, boat for boat with *Noreen*.

A fine sunset contradicted the weather report of an approaching depression; the glass held steady; the air was dry; the wind showed signs of veering; and no swell from the southward troubled the sea. As in former years, we decided on an inshore course for the time being, on a gamble with the tides off headlands and in the bights of the coast; for, without doubt, there was more to gain by pursuing this course, if we succeeded in our tactics, though a great deal to lose if we failed. The weather had to be risked. If the approaching depression held off for twenty-four to thirty hours — all should be well. Everything pointed to this delay; and we had learned long ago, when in the channel, to put more trust in the traditional weather lore of the fisherman than in the official forecasts broadcast from Daventry.

Night fell to a full sail breeze, and *Maitenes*, close-hauled, was on her best point of sailing, though unable to give of her best, as our mainsail, stretched and worn by the incessant slatting it had undergone in the Transatlantic Race, had lost some of its shape and set too full in the luff.

Shortly after midnight the wind backed a full point, heading us off to west by south, and Anvil Point came abeam; an hour later we were heading west-southwest, but making good way. We held this course till the approach of dawn; and at 2:40 A.M., Portland, a point and a half before the beam, bore N.W.½ N. with Anvil at N.E. by E.½ E. We still had over an hour's tide in hand, and another hour after that before the foul stream became of any strength; and though the glass was showing a tendency to fall, the drop as yet was negligible.

Yet a reconsideration of the inshore course was obviously desirable, and tactics for the new lap had to be decided within the next hour or less. We had undoubtedly reaped the benefit of the first fair tide, after successfully cheating two foul ones; but our position gave us a clear alternative of continuing on the offshore tack till we could come about and lay the Lizard. If the wind backed within the next twelve or fifteen hours the gain would more than compensate for any loss experienced in failing to cheat the oncoming easterly stream; if, on the other hand, the wind held true and steady Lyme Bay was our obvious objective. We looked anxiously at sea and sky as dawn started to break, saw the glass had steadied again, and made our decision.

At 4:30 A.M. we tacked inshore, heading northwest by north — and sighting, in the crepuscular light, *Dorade* standing away on the starboard tack. For a moment I almost decided to tack again, and sail boat for boat with her; and had we done so there would have been a different story to tell.

But this course of action was disastrous. If right in theory it proved wrong in practice; for no sooner had we sighted Lyme Regis and tacked seaward again than the wind fell away to a fickle breeze. All that day we struggled across Lyme Bay to light, baffling, and tantalizing head winds — unable to reach the steady breeze we could see on the water a mile or two ahead. There appeared, at times, to be wind all around us — wind everywhere except in the circumjacent area in which *Maitenes* ghosted.

Well placed for the first of the fair tide, we had the Eddystone near the beam by 11:00 P.M., and then, with insidious guile, the breeze fell right away to an official weather forecast of strong westerly winds in the channel — backing; and a gale warning for the Irish Coast. We lay becalmed all that night. We lay becalmed all the next morning and forenoon. For twelve hours we never moved, and hope gave place to despair. Dawn on Thursday saw us searching the horizon from aloft without result, though the visibility was not good. Well, the fleet was either miles ahead or in the same predicament; but we had an uneasy feeling that our luck was running from the hour glass — draining away with the pulse of time.

At last a light southeasterly air sprang up and slowly freshened. We started to move. By 2:00 P.M. we were making six to seven knots with spinnaker and balloon jib drawing well; half an hour later we were logging over eight knots; before the first dog watch came on deck our small spinnaker had replaced the masthead one, and the working staysail was set.

We met, of course, a full foul tide off the Lizard, which was abeam at 5:00 P.M. — nearly twelve hours astern of our time last year — but we were traveling fast and holding a steam trawler outward bound; and we ignored the race, sailing right through it. Perhaps it was as well we did not realize that the leading boats were over six hours ahead, though this still gave us a sporting chance of saving our time on many. Something vastly different, however, was in store for us. By dark it

was blowing fresh and time to reef; but as the Longships lay only a short distance away, I decided to run under the lee of the Cornish Coast for this maneuver, thinking that in the end time would be saved.

At 8:30 P.M. we came about, lee rail well under, and ran off, with the wind freshening fast. Half an hour later we had the lighthouse a cable away to starboard, and we held on a short while longer to clear some shoal patches before heaving-to and shortening down. Then, without any real warning, we seemed to be in the middle of a veritable pampero. It started to blow so hard that we could do nothing with her; the wind came cascading and zipping off the high hills, hurtling down gullies and crevices, churning the sea white, whipping solid belts of spray from the surface.

The ship lay over and reeled; we dodged her through a succession of vicious squalls and blinding rain, thinking each one would dismast her. Before we knew what had happened Pendeen Light flashed on the bow, towered overhead, and disappeared in driving murk. If it was blowing like this outside — and it seemed probable — then something unusual, if not unknown, was going to happen; on the other hand it was quite likely a repetition of the phenomenon we had experienced last year when the velocity of the wind pouring off the high hills round the Lizard was twice its velocity a mile or two offshore. Actually, this was the case, though with the steadily falling glass we concluded it was otherwise; and as St. Ives was only a few miles away we decided to dodge her along, anchor, close reef, and then come to a decision. We came to in St. Ives Bay in a black rain squall, missing a sheltering collier by feet and having to pay out over 45 fathoms of cable — though the depth was only eight fathoms — before she held.

Reefing was slow work, the canvas being hard and stiff, the crew soaked to the skin and tired, the night black as Avernus. By the time we had finished dawn was breaking, and no sooner had we weighed than the wind veered four points to south, veered again to southwest, came nearly to west, and started to ease right away.

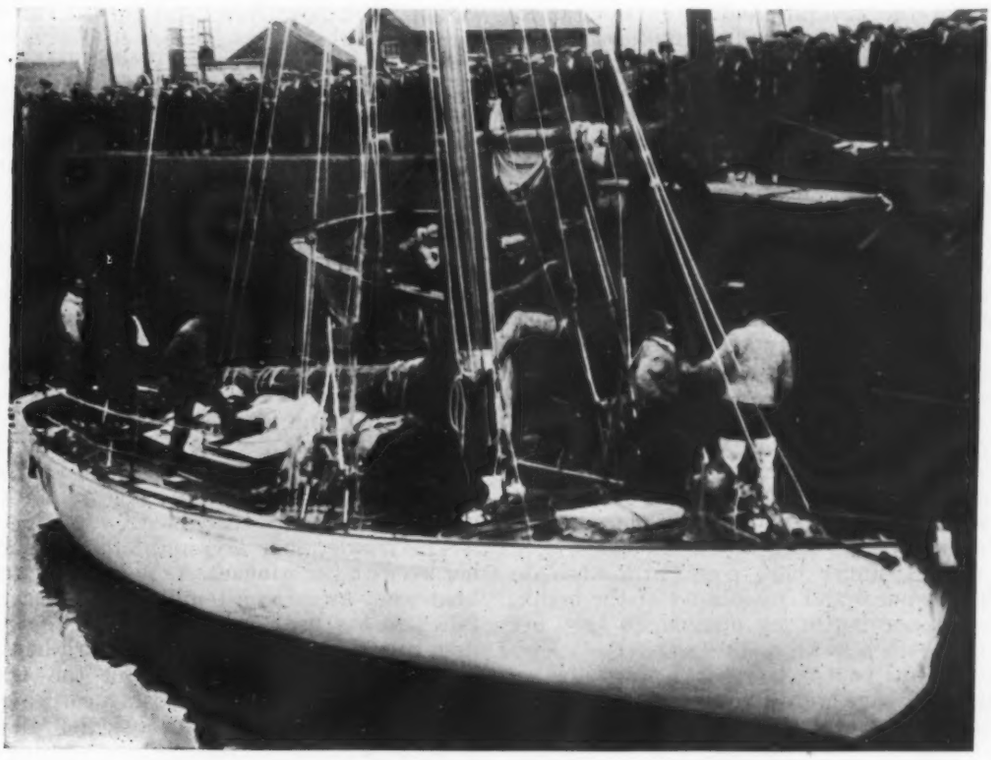
One by one our reefs came out, but we had lost valuable hours, and by noon we were under full sail, close-hauled in a light breeze, having logged only 31 miles, and steering N.W. by W. An hour later the wind started to freshen again and backed a point. We eased sheets a trifle and were soon logging nearly eight knots.

The glass was still dropping steadily and during the afternoon the wind freshened. At 2:30 P.M. I hauled away half a point to the northward, a meridian altitude, an hour before, having put us to the southward of our course. Shortly afterwards *Noreen*, reefed down, was sighted running back, having obviously given up; and an hour later, in a temporary lull, we had a balloon staysail set. This had to be handed at dark owing to the steadily rising wind; but during the night we reeled off the knots, making sometimes over eight and a half, rarely dropping under eight; and the log, I knew, was under-registering.

Rain squalls and mist made visibility poor; but the Old Head of Kinsale Light was sighted in a lull at 3:00 A.M. on Saturday, bearing roughly N. by E.; and two hours later Fastnet turned up half a point on the lee bow, distant eight to nine miles — a run of about twenty-four hours from coast to coast.

Long before that, however — two hours before Friday turned over its watch to the succeeding day — we had seen the side lights of several ships bound southeast. We knew what that meant, and could only hope that some freak of weather would somehow return us the hours we had lost. The glass was still dropping steadily; the wind was freshening fast and backing; and it seemed possible that the leaders might find themselves close-hauled while we still had the wind free.

But no such luck came our way, for by the time we had sighted Fastnet it was again time to reef. We hove-



"Maitenes II" was towed, damaged, into Swansea by a steam trawler

to in a heavy rain squall and mustered at stations. And then, in sheer perversity, the batten pockets tore and the mainsail started to rip. There was no time to waste. We were near a lee shore in a rising sea, though the ship was under full control. She lay easily and steadily under staysail about six points off the wind, while we bent the trysail, lashed the mainsail on deck, reefed the trysail — for it was now blowing a moderate gale — handed the working headsail, and set a reefed storm staysail in its place.

We rounded the rock without difficulty, though we had wasted three more precious hours, and drove her hard to make an offing; but at noon we were forced to heave-to on account of the heavy seas running and the weight of wind.

From now onwards the report I wrote on arrival at Swansea, amplified and amended a little where necessary, will reveal better than a longer description the march of events:

⚓ ⚓ ⚓

. . . The ship, hove-to on the starboard tack, lay with her head pointing south-southeast, making three to four points leeway. We remained hove-to all Saturday afternoon, evening, and night with wind and sea still increasing and with fierce rain squalls sweeping over at regular intervals. The glass had stopped dropping at about 10:00 A.M. that morning, had risen a tenth by noon, had fallen the same amount by 6:00 P.M., and then remained quite steady, though there was more weight in the wind and the squalls were becoming more frequent and vicious.

At 8:50 P.M. the wind veered two points, and the ship lay heading south, fore-reaching at about 3 knots in a high steep sea, but was still well under control. Force of wind, 8–9.

At 4:00 A.M. on Sunday morning the wind again veered two points, and the ship lay south-southwest. The seas were very high, were occasionally breaking aboard and filling the cockpit, and more than once broke halfway up the trysail. Force of wind, 9.

By 9:00 A.M. the ship was not so well under control. When a heavy squall struck her, as she broke through the top of a high wave, her bow paid off and she lay nearly beam on to the seas before facing them again, long enough to cause serious apprehension, as a sea breaking aboard in these circumstances might well have swept the decks.

At 10:00 A.M. all the storm trysail hanks parted in a tremendous squall, though the sail still held by tack and halliards. I was afraid, however, that these, too, might part under the unfair strain, but I considered from past experience that I could probably keep her temporarily under control with the trysail only, if the necessity arose. Force of wind, 9–10.

At 11:45 A.M. the ship was overpowered by a terrific squall and lay nearly on her beam ends. I decided then that our best course of action was to get the ship before the wind under bare poles, with a small sea anchor streamed astern to steady her, and oil bags placed along both sides. Had we been in open waters she could have lain, as she wished, under bare poles with absolute safety; but the steepness and irregularity of the breaking seas made it essential, in my opinion, to keep her bow or stern on to them at all costs.

The sea anchor was bent to a 3½-inch warp and secured aft. Eight oil bags were filled with fish oil and placed along her sides, and knives were placed handy to cut away the trysail in case it jammed and left the ship temporarily out of control in a dangerous position.

The maneuver was successful, the ship paying off without being swept. The sea anchor was streamed astern, the staysail lowered, and the ship kept before the wind, not always without difficulty. I did not, however, feel that the risks incurred in sending some of my crew for'ard to bend on and set another storm staysail would be justified by the results obtained.

A short time later, at 12:45 P.M., Colonel Hudson, who was clearing an oil bag by the after starboard stanchion, was thrown overboard by a violent lurch of the ship. We threw a lifebuoy as soon as possible, and I swung her off the course in the hope the sea anchor warp would ride towards him, that possibly he might be forced into the drogue itself, and that somehow we might be able to haul him in. He succeeded in grasping the warp, but it was torn out of his hands, and, encumbered by seaboots and oilskins, he sank at once.

The steepness of the seas had again increased, and they were breaking heavily. From time to time we were pooped and the ship became more difficult to handle. The loss of Colonel Hudson was a great blow to all hands, and I realized that some of the crew were nearing the stage of physical exhaustion — a serious matter — though their behavior was splendid. The ship was steering roughly east, the wind again having veered — and making six to seven knots. Force of wind, 10.

At 2:45 P.M. we sighted the steam trawler *Dunraven Castle*, and I semaphored her, requesting her to stand by until the weather moderated. I estimated we were then approximately 80 miles southeast (magnetic) of Fastnet Rock, and the trawler semaphored that she was approximately 130 miles west of Lundy Island.

About an hour later, wind and sea having again increased, I semaphored that we could no longer run with safety if the weather became any worse; and the trawler replied that she had just received another gale warning. The seas now changed in character — we were on the Labadie Banks — became still steeper, still more confused and irregular, running in from all sides; and we were pooped heavily several times. Though the glass had just started to rise it seemed likely, in view of the renewed gale warning, that it would blow harder than before from West and Northwest and drive us on to a lee shore in less than 18 hours — with, as likely as not, the trawler standing by unable to be of any assistance. On the other hand it seemed possible that the gale might moderate in time to let us heave-to again on the starboard tack and work clear. I realized, however, that the ship was in imminent danger of being fatally pooped, and after considering the situation from every point of view, I concluded that I was not justified in taking further risks, and decided to abandon ship.

At 4:00 P.M., the sea being at its worst, I fired rockets to attract the trawler's attention, and served out lifesaving jackets. The *Dunraven Castle* steamed ahead, lay, manned and launched her boat under her lee, and steamed ahead again slowly, paying out the warp. The first attempt to get the yacht alongside the boat failed; but after very fine maneuvering on the trawler's part the second attempt succeeded.

The trawler then lay, and hauled her boat in under her lee with her winches. As soon as we were aboard the boat went away to attempt to secure a tow line. This failed as the boat capsized near *Maitenes*, though the men succeeded in scrambling aboard her. In the rather confused situation that arose, the trawler drifted towards the yacht and fouled her, carrying away the top half of the stem, both forestays, the rail near the starboard bow, a lower cross-tree, and causing other damage

(*Continued on page 118*)

Building a Light Weight Tender

By VICTOR SLOCUM

THIS eight-foot yacht tender was designed to meet the demand for the lightest and most compact boat of its length. Without a load the V-bottom section allows of minimum wetted surface, a desirable feature when towing. When loaded this form rapidly accumulates displacement. With the beam half the length, full ends on the topside, and ample depth, she will safely carry heavy loads. Besides being easy on the painter, and of great buoyancy, she is light and short enough to stow almost anywhere when taken aboard.

The chine has been worked out in such a manner as to present no serious obstacle to the amateur boat builder. There is no difficult twist in the fore end of the garboard. This has been purposely eliminated, and it makes a better bow for this boat. In any good design, bow and stern should be well balanced to insure seaworthy qualities, as evidenced in whale boats and bank dories.

On account of the light weight of this boat the construction may appear at first to be rather intricate, but by following the indicated steps the process is made clear, and apparent difficulties will be ironed out as the work progresses. Some knowledge of carpentry on the part of the amateur builder is, however, necessary. Also, a certain knowledge of the nature of the different woods adapted to boat building, together with a certain aptitude for joinery and facility with tools are a requisite if one is going to build the boat himself.

This light construction calls for great care in making fastenings. Have the right sized bitts and drills for everything, and have plenty of clamps to hold the work up well before fastening off. Care must be taken with the light work, even if progress is slow and expensive. The descriptive matter and accompanying drawings are correlated; directions and measurements not given in one will be found in the other. They are equally important and should be given equal attention.

White cedar $\frac{3}{8}''$ thick is the lightest practical wood for the planking. On account of the short lengths required it should be possible to obtain it perfectly free from knots or any other defects. The outboard screw fastenings are sunk slightly under the surface of the wood, just enough to putty. Fair round holes may be made by the screw heads by first centering a clean, new, $\frac{3}{8}''$ Jennings bitt in the hole and making a backward cut with the lips of the auger point. When you drive the screw the grain of the wood will break in fair, giving a finish that may be either painted or varnished. But don't try this on any hardwood. The chine filler fastenings must be plug bored, $\frac{3}{8}''$, as they go down deep in the oak.

The materials needed for construction are as follows:

Keel: Oak, one piece, $\frac{7}{8}''$ by 6″ by 7′.

Keel filler: Oak, one piece, $1\frac{3}{4}''$ by 5″ by 7′.

Chine: Spruce, two pieces, $\frac{7}{8}''$ by $2\frac{1}{4}''$ by 10′.

Chine filler: Oak, two pieces, $\frac{3}{4}''$ by $1\frac{3}{4}''$ by 10′.

Frames: Hackmatack knees, six pieces, each sided $\frac{3}{4}''$.

Stem: Hackmatack knee, one piece, sided 3″.

Breasthook, quarter and sternpost knees: Hackmatack, sided $\frac{3}{4}''$.

A word about these hackmatack knees and how to get them. They are marketed in the rough, hewn to thickness from 4″ to 8″. I would advise sending paper patterns to the nearest mill dealing in ship timber, which will, I am sure, be glad to re-saw hackmatack to the required thickness, and also rough-saw it to shape at slight additional cost. This will save labor and time.

Transom: Oak or mahogany, $\frac{3}{4}''$ by 21″ by 4′.

Sternpost: Oak, $1\frac{1}{2}''$ by 4″ by 2′.

Gunwales: Oak, 2 pieces, $\frac{3}{4}''$ by 2″ by 10′.

Seam battens: Spruce, eight pieces, $\frac{5}{8}''$ by $1\frac{1}{2}''$ by 10′.

Guard battens: Oak, two pieces, $\frac{5}{8}''$ by $1\frac{1}{2}''$ by 10′ (grooved out to receive 3″ cotton rope).

Planking: White cedar, twelve pieces, $\frac{3}{8}''$ by 8″ by 10′.

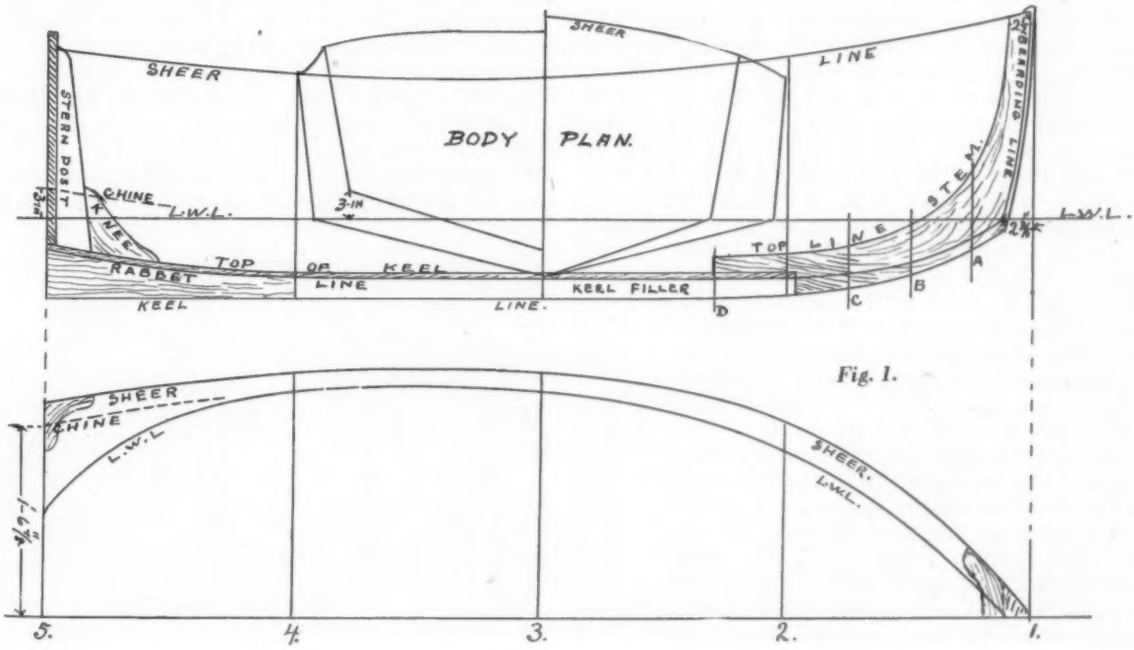


Fig. 1.

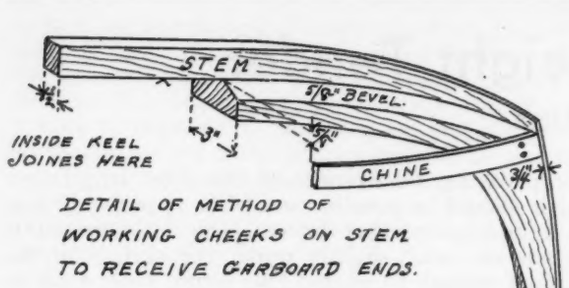


FIG. 3.

Rises: Spruce, two pieces, ¾″ by 2″ by 10′.
Thwarts: Ash, two pieces, ¾″ by 9″ by 4′.
Hardware is entirely brass or bronze, and consists of:
Three dozen, 3/16″ by 2″ flat head bronze bolts (for bolting floors to frames).
One dozen ⅜″ by 4″ flat head bronze bolts.
Three ⅜″ by 6″ flat head bronze bolts (for keel).
Brass screws: one gross 1¾″ No. 9.
Three gross 1¾″ No. 8.
Two gross 1½″ No. 6 (for seams at frames).
Eight gross ¾″ No. 6 (for seams).
One-half gross 2″ No. 10 (for keel and sternpost).
A ball of cotton wicking for caulking, white lead putty, paint, and varnish. Paint will be found most serviceable.

STEP No. 1. Lay down lines full size from Fig. 1, with given offsets and measurements. Mark them on heavy building paper so that you can cut out the patterns afterward. Start the lines with l.w.l. for a base line. Three feet from this, and parallel, strike center line of half breadth. Lay off the Sections 1, 2, 3, 4, and 5, two feet apart, and the short sections A, B, C, and D, 6 inches apart. The laying down measurements are expressed in feet, inches, and eighths-of-an-inch. The heights of sheer line at the various Sections are: No. 1, 1–8–0; No. 2, 1–4–0; No. 3, 1–2–0; No. 4, 1–2–0; No. 5, 1–4–4. L.w.l. to rabbet line: A, 0–2–1; B, 0–4–1; C, 0–5–2; No. 2, 0–5–5; No. 3, 0–5–5; No. 4, 0–5–5; No. 5, 0–4–0. L.w.l. to keel line, No. 2, 0–9–3; No. 3, 0–7–6; No. 4, 0–7–6; No. 5, 0–7–6; and at A, 0–3–0; B, 0–5–4; C, 0–6–6. The sheer half breadths are: No. 2, 1–7–2; No. 3, 2–0–0; No. 3, 2–0–0; No. 5, 1–9–0. L.w.l. half breadths are: No. 2, 1–4–3; No. 3, 1–10–1; No. 4, 1–10–1; No. 5, 0–10–0. Transfer the half breadths to sheer plan and lay off the sections of the body plan. You are now ready to cut out your working patterns, except lining the top of stem. From l.w.l. up at A, is 0–4–6; from l.w.l. down at B, 0–0–4; at C, 0–2–4; No. 2, 0–3–2; at D, 0–3–2. Cut the stem out with a sharp knife, noting that it fits on top of keel, starting at D.

STEP No. 2. Make off the frames, Fig. 1, and assemble directly on the floor drawing. Fasten together with bronze bolts, 3/16″, flat head. Mark center lines on spalls before taking up. Do not notch frames for the chines at this point. The frames should be from a grown crook with a continuous grain from keel to gunwale. As an alternative the built-up system of straight grain stock may be used but it is not so good.

STEP No. 3. Make off the stem from a 3-inch grown hackmatack knee. Work the cheek pieces for the reception of the garboards on the sides of the stem itself, as shown in Fig. 3. This makes a solid and nice job. It is best to leave plenty of wood on the bevel side to trim, even after you have fastened in the chine ends.

STEP No. 4. Make off the transom, and fit sternpost and knee. You can get the bevels for the bottom from the floor drawing.

STEP No. 5. Make keel and keel filler, as shown in drawings. Assemble to stem with ⅜″ bronze bolts. Lay this on floor drawing and transfer section marks.

STEP No. 6. Set up the frame as shown in Fig. 4. Fasten the uprights (to hold the boat in place) as shown, directly to the section lines on the floor, and plumb and brace each. Temporarily clamp the frames to their respective uprights, at a convenient working height from the floor. No. 3 and No. 4 are the same level all around. Establish this level first and get your plumb lines afterward. Put No. 2 plumb over the center line and bring the chine line level with the chine lines on No. 3 and No. 4. The sections are now ready for the keel.

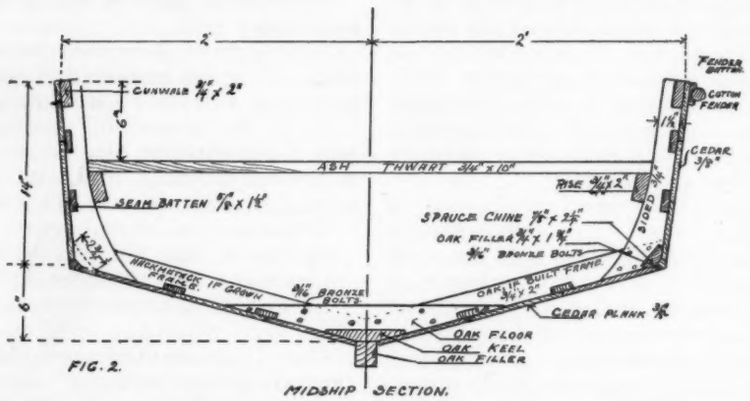


FIG. 2. MIDSHIP SECTION.

Throw your assembled keel over the frames, and fasten all down to place. The knuckle of the stem is level with No. 2 chine, so haul your stem head down to a post, secured and braced to the floor, until that jibes. Then fasten the transom so that the top of the keel liner is level with No. 4, and the setting up is complete. Use plenty of braces and don't forget one from the knuckle of the stem to some point well up on the shop wall. Keep all braces in place until the boat is planked and ready to take off.

STEP No. 7. Cut chine notches in frames. Begin by marking diagonally on the after side of No. 2 frame, and on the fore side of No. 3 and No. 4 frames. Follow Figs. 5–6–7, where the measurements are given. The points are equidistant from each corner. Have a short section of your chine piece, 7/8″ by 2¼″, ready to use as a guide in getting the side marks of each notch. You can get the proper bevel for each cut by using a fair batten.

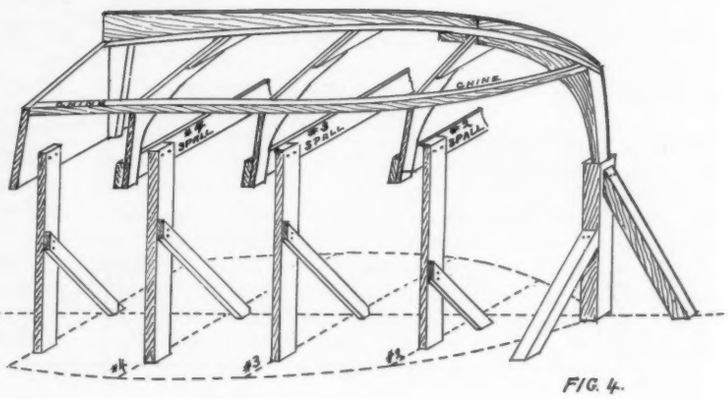


FIG. 4.

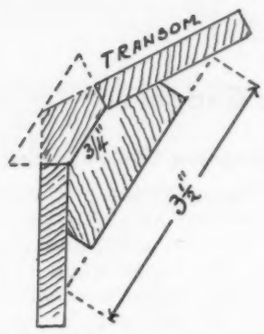


FIG. 5.

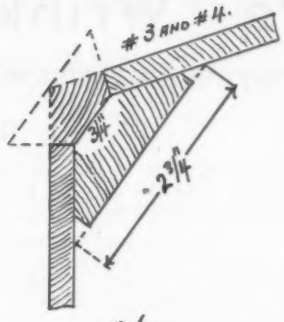


FIG. 6.

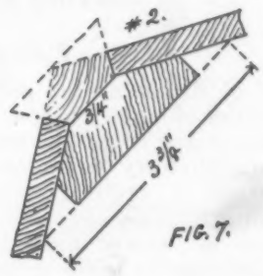


FIG. 7.

STEP No. 8. Work the chine pieces on square. Unless the stock is very supple, the fore end of each chine will have to be steamed or boiled for an hour before wrapping on. This is the only part of the job where steam bending is necessary. If there is no other way, a common washboiler over a gas stove will do. All boat builders know that wonders can sometimes be done in this way in a pinch. Cover the top of the boiler and the wood two or three feet back with old bags, or like material, to steam as much as possible. Before steaming be sure that the ends fit in the stem, as in Fig. 8. Fit the chine to transom as shown in Fig. 11. Since the bow of the boat is very full, see that the curve in the chine is fair and has no flat places. This takes a good deal of judgment, and care. Have short braces ready for this to work in radially from the stem. When each chine is set and fastened work off the corners in line with each frame. This will develop the flat ¾" section for the reception of the chine piece filler. Fair up all meeting surfaces before starting to plank.

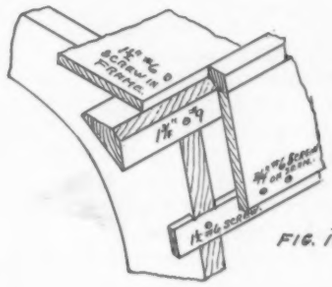


FIG. 14.

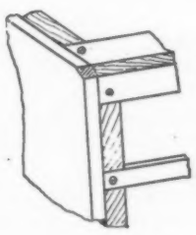


FIG. 11.

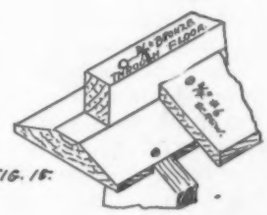
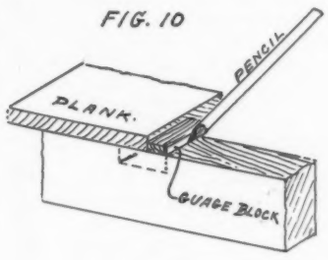


FIG. 15.

STEP No. 9. Place bottom planking in three streaks, as shown in Fig. 2. They will be found to be very nearly parallel in widths. The best way to get the location of each seam batten is first to joint the plank to shape, and clamp to place. Fig. 10 shows how to mark for the off edge of the batten on each frame. The gauge block shown is half the width of the batten. Come up the plank, brad the batten to the line, in its place, and mark the opposite edge. Come up with the batten, make cuts, then fasten batten in its place on each frame with small screw in center set in deeply enough to allow fairing up with the plane. Fasten plank in place, and repeat the process as you go along. You will thus find that you will not have to worry about the exact center of each seam batten. Finish the bottom planking to the line of the filler, and after fastening down, true up the chine line with the rabbet plane.

FIG. 10



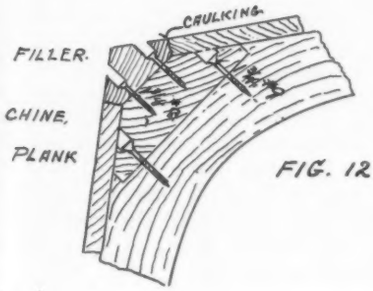


FIG. 12

STEP No. 10. Another wrinkle, which is just as easy, may be applied when you fit the chine filler. This is clamped securely to the last plank and held in place to the chine piece with brass screws, Fig. 12. Figs. 11, 14, and 15, explain the method of doing this part of the work.

STEP No. 11. Start the side planking against the chine filler, and work the seam batten as it was done on the bottom. If the stock is too stiff to bend without danger of cracking, boil the fore ends.

STEP No. 12. Trim the plank ends flush with the stem with a finely set block plane, and caulk lightly behind the plank, as shown in Fig. 8. Fasten on stem band. Keep boat on blocks until smoothed off. Turn over to fit breast hook, quarter knees, rises, thwarts and bottom boards. Be sure to paint inside of boat before fastening bottom boards and thwarts. Clench in the painter ring over a washer before putting on the stem band.

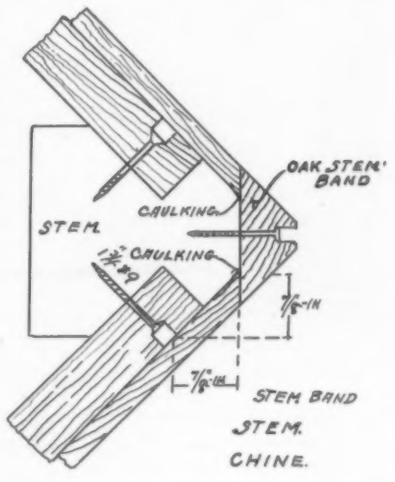


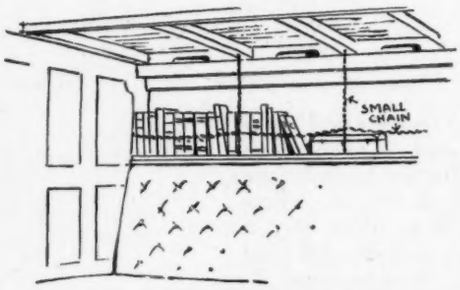
FIG. 8.

More "Wrinkles"

Solving Some Annoying Problems with Simple Gadgets

A Sliding Pullman Berth

ONE of the numerous problems confronting the builder of a new boat, or the rebuilder of an old one, is how to get the accommodation plan of a sixty-footer into forty feet or less. Bunk space is probably the greatest drawback to this. A man must have six feet or more to sleep in and it doesn't take many times six feet to make forty. The best idea I've ever run across, except for those gadgets in modern apartments, was, strangely enough, on a fishing vessel.

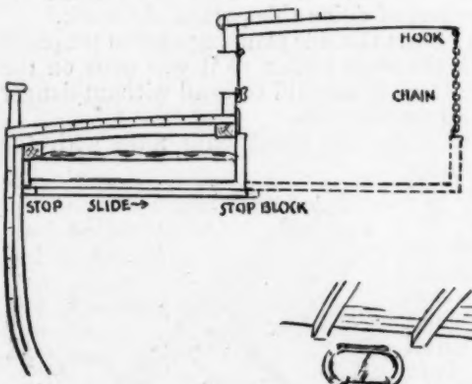


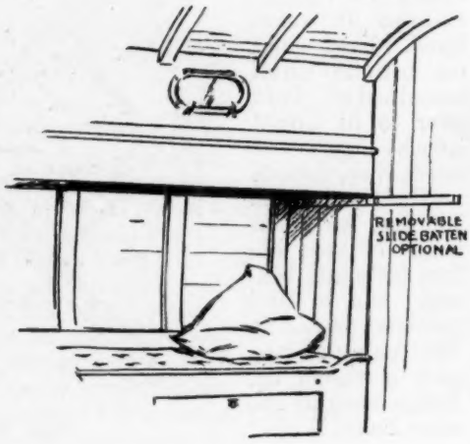
Brass chain to prevent books from falling off a shelf

This particular arrangement ran between two bulkheads. The outer slide battens were removable, being cleverly fitted so as to drop into place and carry the weight of the bunk. This was necessary, as the battens came across the cabin doors.

However, it would be possible to use chains and hooks in the cabin carlins, placing a stop block at the correct place. The whole thing has to be carefully made as it works like a big drawer and will jam, as most of the alleged seagoing drawers do. The bottom can be finished and paneled to hide the springs.

These bunks are a pleasure to sleep in, whether in port or at sea. They are always cool and airy, being right next to the trunk cabin ports, and if made deep enough, impossible to fall out of. But what tickles us is the fact that all one has to do is tumble out, toss in the pajamas, slide the bed out of sight and you're ready for the coffee and . . .





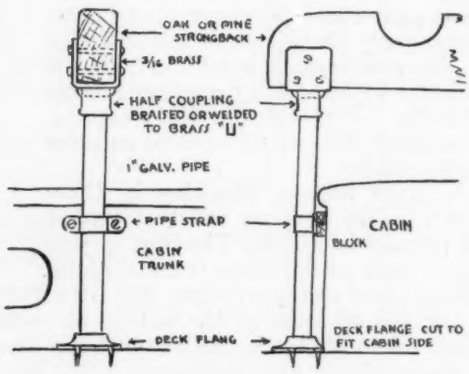
A disappearing upper berth

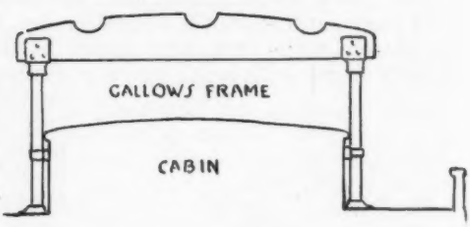
The Birth of a Seagoing Gallows Frame

Of all the cuss words that every sailor who follows the sea in little ships has stowed away under his booby hatch, at least one-half were invented and are reserved for the times when that ornery gadget called a collapsible boom crutch comes adrift while the ship, under power or shortened sail, is rolling her rails under in a seaway.

The other half of the seaman's vocabulary generally pollutes the air when the same boom crutch drops from under the boom while the ship is at anchor, due to some low yachter passing a biscuit toss away in his 40 m.p.h. express cruiser.

We were lying at City Island one night after forty hours of bucking a head wind. It was late and it was calm. The ship lay like a painted ship and the sounds drifting up the hatch indicated that hardy seamen slept below.



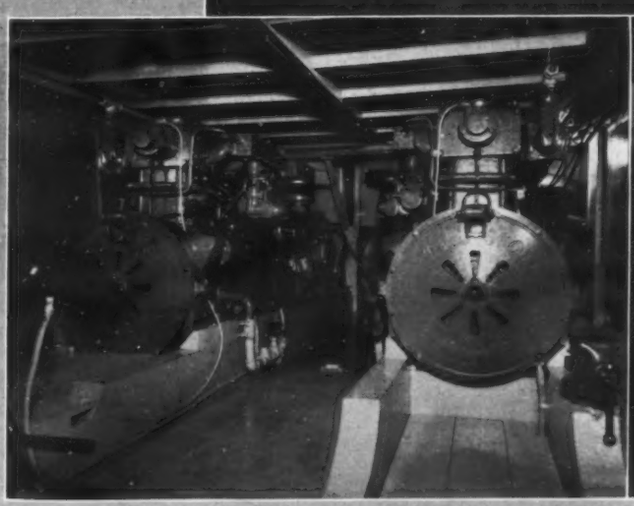


Right. A gallows frame that is easy to build and erect

Then out of the darkness came a tidal wave, a whole darn row of tidal waves. No doubt just one of those floating palaces passing up the Sound, but all hell broke loose aboard, beginning with the clatter of the boom crutch as it dropped from its patent slot. The main boom and gaff, with the hastily stowed mains'l between their arms, swooped across the deck like a visiting ghost. Someone had forgotten to make fast the mainsheet, of course, so there was naught but the backstays to stop 'em. The skipper, cursing and fuming, popped his sleepy head out of the hatch just in time to meet the boom on its starboard run. Down he went like a broken jack in the box, right into the arms of the mate, who was at that moment placing the chimney on one of the refractory cabin lamps which she had just lit. For a moment they

(*Continued on page 108*)

"Helen"—A 61-Foot Express Cruiser



Rosenfeld Photos

"Helen" was designed and built for Griswold S. Hayward, of Boston, by Stephens Bros., of Stockton, California. Her raised deck breaks into a low and graceful sheer in harmony with the forward sloping curves of the upper and lower deckhouses. The spacious forward deckhouse with its ample windows gives a broad outdoor view from the comfortable shelter of the warmly decorated interior. Surmounting the forward deckhouse is the enclosed bridge commanding a full view on all sides of the cruiser and provided with complete engine control. Twin Hall-Scott gasoline engines located in the neat engine room under a bridge deck furnish the power.

Impairing Good Design

In Power Craft Especially, the Amateur Designer Should Seek Expert Guidance

By HENRY CLAY FOSTER

A NEAT little express cruiser lay alongside the club float and I went down to look her over. On close inspection she was really a beauty and her owner watched me proudly from the bridge as I registered approval.

"Say, Skipper, that's a good-looking boat you have there." I meant it. And judging by some familiar lines I decided she was from the board of a certain naval architect who had put out many good and good-looking boats before her. Her owner seemed immensely pleased.

"Sure she is. She ought to be," he remarked between puffs at his pipe.

"Her designer surely knew his stuff, eh? She shows it. Who designed her, anyway? I'm just wondering if my guess is right."

"I did. I designed her throughout." He said this with a bit too much emphasis for an undisputed statement.

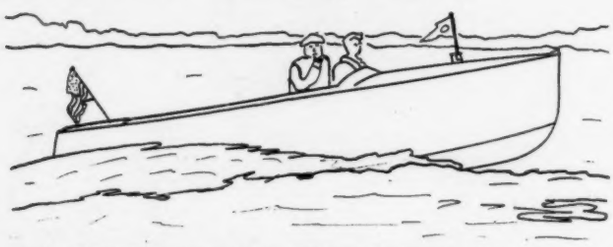
"You di-id?" I answered, simulating belief — and admiration. "Well, she's a slick-looking job, all right." Then a mischievous impulse possessed me. "Say, Skipper, what s her speed-length coefficient?" I asked innocently.

"Her what?"

I repeated. He deflated visibly. His expansive manner was gone in a second. "I — I didn't use one. I found she really didn't need it. Sorry, but I've got . . ."

"That's too bad," I agreed. "They help a lot and they don't cost an awful lot. You can get 'em now in chromium, you know."

"Ye-ah, I know." He was suddenly in a hurry to get away. "I gotta get going now. Tell you all about it next time." But he won't. Not if he sees me first.



An underpowered runabout with fast underbody lines but not enough power to get her up into planing trim

His design? My eye! That bird had no more designed that boat than I had the Brooklyn Bridge. I had mentioned a term in naval architecture, a simple one or I wouldn't have known it, and he accepted it as a gadget. What he really had to do with the designing of that boat, probably, was to tell the naval architect the general type of boat he wanted and to supply him with a crudely drawn deck plan. And it is dollars to doughnuts that if placed as he had them laid out, the corners of the bunks, lavatory, icebox, stove, etc., would have protruded through the sides of the hull.

Not that this is a particularly stupid error on the part of a newcomer, or even of an old-timer, for that matter. It isn't. Any naval architect will tell you so. And if you don't believe it, just lay out a deck plan for yourself, of a cruiser, say, and see if you don't tend to do the same thing. The tendency of us laymen is to forget to allow for the flare and the shape of the hull sides. But this is neither here nor there. The point is that naval architecture, especially in power, does not lend itself to the creative genius of an amateur unless he is the rare exception who has made it the hobby of years, any more than does the engineering that built that bridge to Brooklyn, and bigger and better bridges since.

The relation of the forces involved in marine propulsion to planes, curves, stresses, weights, and what not form problems of bewildering variation and complexity to the layman. To him they are about as intelligible as Sanskrit to a Fiji Islander. The infinite variety of principles, some of them known and computable, others elusory and still in a measure experimental, are the raw materials with which he must employ his artistic sense to create a thing of beauty. And that thing of beauty must be mechanically efficient. Is it any wonder, then, that some people believe an able naval architect is born — and not made?

And yet we find thousands of hopelessly uninformed boatmen of all ages fondly believing that they can or did design or "re-design" a boat! Only a portion of these are the owners of custom-built craft who have retained naval architects and promptly forgotten them, preferring to remember that they instructed him in a point or two as to what they wanted in the boat. This variety of amateur designer is entirely innocuous — and quite human, withal. In a sense, he has "had the boat built to his ideas." He usually approved the rough sketches as they came to him and later asked for the impossible as the design progressed on the board of an expert. He has paid the bill and the boat is his. He feels that the boat embodies a lot of his thought, and it does. But he stands in sharp contrast to the sportsman who readily tells the name of his designer with a suggestion of the pride of an owner of a Rembrandt or a Corot.

It has been my fate to receive and have to answer, truthfully if possible but at least tactfully, letters (accompanied by drawings) from some thousands of would-be designers of motor boats. They range from schoolboys in manual training classes to professional men, state senators, garage mechanics, grocery store proprietors and taxicab drivers. Some of the letters have come from inmates of state penitentiaries, and some appear to have come from other state institutions, although they probably didn't. Among those thousands of designs, on which much work and more talk had been expended, not one has possessed any merit worth mentioning. I have submitted them by the score to naval architects of standing, so I am not making this pronouncement without authority.

There is only one thing common to all this meritless

Trying to get the outboard to plane

effort, made, for the most part, without the slightest conception of the action of the forces involved — or of the identity of those forces. It is the profound conviction that anything radical enough is almost certain to be successful. The readiness to ignore common practice as necessarily obsolete, regardless of its basis in experience, is astonishing. However, I find that few of these theorists ever get afloat in their contraptions, and those who do find they have added nothing to the science of boat design. These "designers," too, are innocuous, except that they get the wrong slant on the sport and miss a lot of pleasure in its pursuit.

But the man who undertakes to build, or to have built a boat which he, himself, has assembled from features of other known models, and without expert guidance, is responsible for a lot of floating monstrosities, and even more submerged ones. He is first cousin to the man who buys a stock boat and undertakes to change and improve it in some way or other. No amount of protest will keep him from going ahead on the assumption that the builders knew far less about boat design and construction than he does although they have spent their lives in it, and he is a rank tyro. One owner of a fine stock runabout claims that he moved the motor five inches forward and got an additional five miles an hour in speed! Putting in additional power without knowledge of what this greater weight and power will do — until it is too late — is also a favorite way for this type of amateur designer to run amuck. He often dodges admitting his error by blaming the engine, or the original builder of the hull, if a stock design, or the designer if it is a custom-built boat. And we all know numerous instances of boat owners who sought to plane displacement hulls built with buttock lines that will not let them plane with any power. A new motor of double the power of the old one only gives such a boat a scant mile or so an hour in speed and she drags the river with her in doing it.

If such owners had sought competent advice they would have been spared the expense and disappointment of this all too common mistake. But eagerness for "more speed" — that fetish of motorboat users today — has cost him good money to no avail. The same sum expended on a new motor of the proper power with the right propeller would have added much to his pleasure in the outfit, provided, of course, he could forget the yearning for speed.

There is a little mathematical formula in naval architecture which, if understood and accepted by cruiser owners, would save them much grief and disappointment. That is the speed-length coefficient, which was recently discussed in this magazine in a different connection. As you may remember, the speed-length coefficient is found by dividing the speed of the boat by the square root of the water line length. To get it, an owner has to abandon his impression of what speed the boat makes, and take her out on a measured mile with a stop watch and find out for certain. He needn't tell anybody the jolt he gets when he computes it, as pride of ownership and front porch arguments have probably caused him to enlarge on her speed so often that he has come to believe it himself.

The speed-lengh coefficient of a 25-foot boat traveling at 10 miles an hour is 2. (Divide 10 by 5, which is the square root of the length.) We all know that a boat of this size will go at this speed with moderate power. Likewise, a 36-foot boat goes along at 12 miles with reasonable power — and the speed-length coefficient of this boat at this speed is also 2. And at about these figures you will see most of the stock cruisers today being rated. But the eager amateur is not content with this, or a bit better. He wants his 36-footer to go about 18 miles an hour, so he can show his heels — or rather transom — to the other fellows. And there is where he starts off on his tangent.

Now a 36-foot boat at 18 miles an hour has a speed-length coefficient of 3. That is a different story — but he doesn't know it, as does the expert whom he does not consult. It has been found that power craft with a speed-length coefficient of about 3 are difficult to drive efficiently. If you stop to think, you'll find that few boats of this description travel at this speed or near it. There are exceptions, of course. But in these there are qualifying factors. A new type of weight disposition and the consequent changes in design have effected it in one instance. And there are — or will be — others, no doubt. But the fact remains that as a rule boats with the speed-length coefficient of 3 or a bit over or under, and even up to 4, are difficult combinations to handle. The reason for it is that the speed desired is not fast enough for the boat to plane and yet is too fast for the out-and-out displacement type of hull, which goes through the water. With a planing design and sufficient power, they can be driven faster than the desired speed, but the speed-length coefficient is then higher. But with the power that ought to drive them at the speed represented

An overpowered displacement cruiser, the underbody lines of which are designed for less power and a lower speed-length coefficient than the owner desired. She is not designed to plane — and she won't

in the speed-length coefficient of about 3, they fail to plane. With an overpowered displacement hull, the boat squats aft because of suctions on the rounded buttock lines. With an under-powered planing type, the boat is held back by eddies and suctions of the water on the immersed transom which should be moving swiftly away from the water instead of going ahead so slowly that the water tumbles in on it.

And this situation makes a veritable trap for the eager amateur who would make his 12- or 14-mile 35- or 36-footer step at 18 miles an hour or thereabouts. He goes ahead on the assumption that if so much power pushes her so fast, so much additional power will push her proportionately faster. And it would certainly be fine if this were true. The designers and builders would be happy indeed. The amateur gets a warning from somebody to

Even the outboard must overcome the speed-length coefficient conditions, which occur at about 3 to 4, as it gets underway

the effect that for every additional mile of speed he must pay a higher price in power. And in his eagerness he asserts his willingness to do this, too. So he thinks in terms of more power than ever. When the boat does not step much faster than before, and handles much worse, he is tempted to claim the engine "does not drive her as fast as it ought to," or words to that effect.

From the other angle, in choosing a type of hull, the unguided amateur is also lost, and doesn't know it — at first. The tremendous variety of form in the power boat field, between the slow-speed displacement types and the high-speed hydroplanes, with all the intermediate gradations, makes the selection of the proper type in power a maze to the uninformed. But almost invariably the amateur will choose a speed type of hull for whatever speed or purpose he has in mind, with the expectation that at any speed it means greater efficiency, even with low power. He does not know that he is almost certain to get decreased efficiency instead. It is likely that, with small power, he will get about one-half the speed he might get had he the proper hull form for that power.

Here is a specific example which has recently come to light: A professional man undertook to have a neat little cruiser built. He decided that for power he would like to have a well-known Ford conversion. And for this limited power plant, he chose a step-hydroplane underbody. The combination was daring. It seemed logical, however. But it didn't work. It couldn't. He got about 6 miles an hour, according to his own report. With a clean-lined displacement hull he should have had close to double that speed. All of which goes to prove that the layman is not in a position to know the factors of engineering involved, and when we make a thoroughly logical looking move, we get off the track. And the lay advice we have taken, we find, comes from persons like ourselves who honestly thought they knew and didn't.

(*Continued on page 104*)

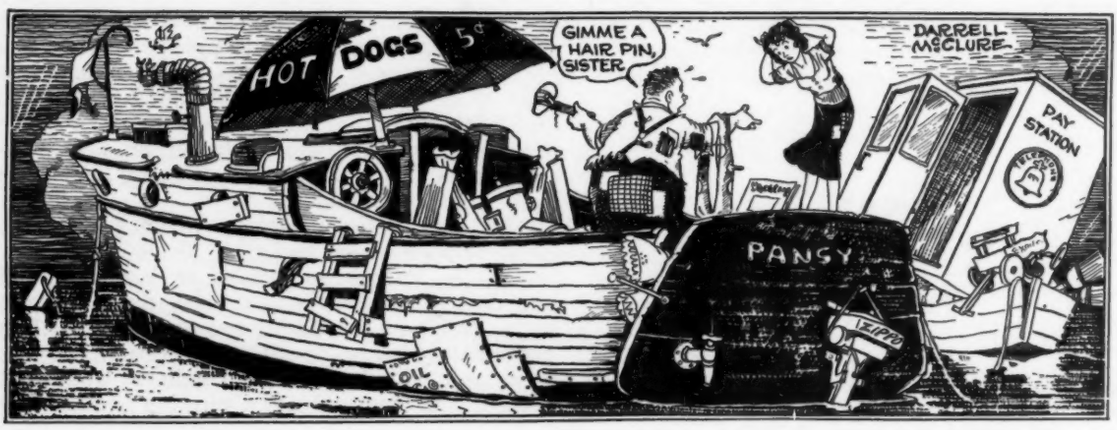
+ + +

The Ingenious Yachtsman

NOW I own a boat kept tied to a float for nary a groat can be found in my coat, or my pants for that matter, for depression has struck and many a duck is down to a buck with the good ship tied to a place in the tide where she swings round and round o'er the same old ground with never a rumble of propeller or grumble of cook in his nook. Meanwhile as I wait for a change in my fate — and some change in my purse — the boat I must nurse as I rave and I curse and she grows worse and worse from lack of repair. So I labor and strive and scheme and connive to use what I have as a sort of a salve till a permanent cure by hands skilled and sure, at a time now obscure, can be had. The packing that leaks in the shaft stuffing box is easy replaced with a pair of old socks much shredded and torn from toenail and corn. For seams that need caulking I use woolen stocking and a seam that's too close for these discarded hose is thoroughly stopped with strips from some old yachting clothes left from days gone by when my pals and I, 'neath warm sunny sky, furnished heart throbs and thrills to the frails and the frills as we sailed grandly away on the waves of the bay.

And then as I look through the YACHTING book, that's loaned by a neighbor to brighten my labor, I discover with pain and some apprehension that motors are now hung with rubber suspension in the hallucination 'twill decrease vibration; so forthwith I hie to some motorist guy and beg the big boob for an old inner tube. Then over the engine I sweat and I blubber and in course of time the thing's hung in rubber though the difference it makes no one can discover, for it squeaks and it shakes as in days of yore when its murmurings awakened the folks on the shore, though the boat was well off a good mile or more. So I look and look through this excellent book and with quickness of light an idea comes to sight: the outboard now charges my dead batteries so a chill winter breeze the darned things won't freeze — just hook the thing up to a Ford generator, put a wire here and there, and then operate 'er. The toilet room door is no more in the way since the gladsome day that I threw it away and replaced it forsooth with a collapsing affair from a telephone booth. And I've found that it's true that an excellent goo to replace marine glue for stopping a leak is chewing gum after a day in the cheek. One thing is a puzzle: how can sinner or saint, devoid of the means of a cent in his jeans, brew a pail of deck paint; but if anyone knows just how I can do it I certainly shall a favor construe it if he'll write me this week and give me the secret as the decks now leak and the bunks and lockers no longer are dry; when it rains all is wet — and so am I.

CARROL KLOTZBACH



The New Haven Sharpie

Developed as a Work Boat and Pleasure Boat, the Type Has Much to Recommend It to the Yachtsman

By H. I. CHAPELLE

IN THESE days of depleted bankrolls, "cheap" yachts are a matter of importance to most of us. The actual cost of a "cheap" yacht will vary, of course, with the individual, but such a yacht must be "the most boat for the money." There are but two possible ways of building an inexpensive sailing yacht. One is to find a builder foolish enough to present you with a boat at a price below cost, or one who, by means of low labor cost and suitable location, can afford to build at a low figure. In such cases, a yacht of more or less orthodox type is possible, but frequently at the sacrifice of workmanship, finish and appearance. The other possibility is the use of a hull type whose form is such that little labor and inexpensive materials are required.

Either of these procedures may result in a cheap and useful yacht for ordinary work. There is a good deal of "bunk" about the necessity of seaworthiness, and though numerous yachts suitable for riding out a winter gale on the Grand Banks are designed and built, yet their actual cruising is limited to protected water and to short 'longshore jumps in good weather. If, for business reasons or by inclination, one cruises under such conditions, it would seem poor judgment to demand a real seagoing yacht and to pay the required price.

To those who admit to themselves that their cruising is thus limited, the sharpie offers a cheap and rather satisfactory type. Some forty or fifty years ago the sharpie was popular as a yacht, but disappeared when the racing machines of the "length and sail area" period became popular. As a matter of fact, the sharpie was directly responsible for the scow type, and from the sharpie developed the extreme rating classes of the early 1900's.

It is impossible to say when the sharpie first came into use. Probably in the 1830's or 40's the New Haven oystermen found that the cost of the dugout canoes then in use was becoming prohibitive and began to use the ordinary flat-bottom skiff, fitted with a centerboard and leg-of-mutton sail. By 1857, the sharpie had begun to develop from the sailing skiff, and two-masted rigs were in use. The sharpie of 1870 was small, its length being between 20 and 28 feet in the majority of boats. About 1878 an Englishman named Thomas Clapham became interested in the type and began building sharpies at Roslyn, Long Island. He developed a modified type known as the Nonpareil, or Roslyn type, which had a little deadrise in the extreme bow and stern, the bottom remaining flat amidships. Many of the Clapham sharpies were yawl-rigged and most of them were built for yachting purposes. The leading

This is the first of a series of articles to appear in YACHTING on some distinctive American types of small boats, many of which have entered the pleasure boat field through the success of their predecessors as work or commercial boats. *Ed.*

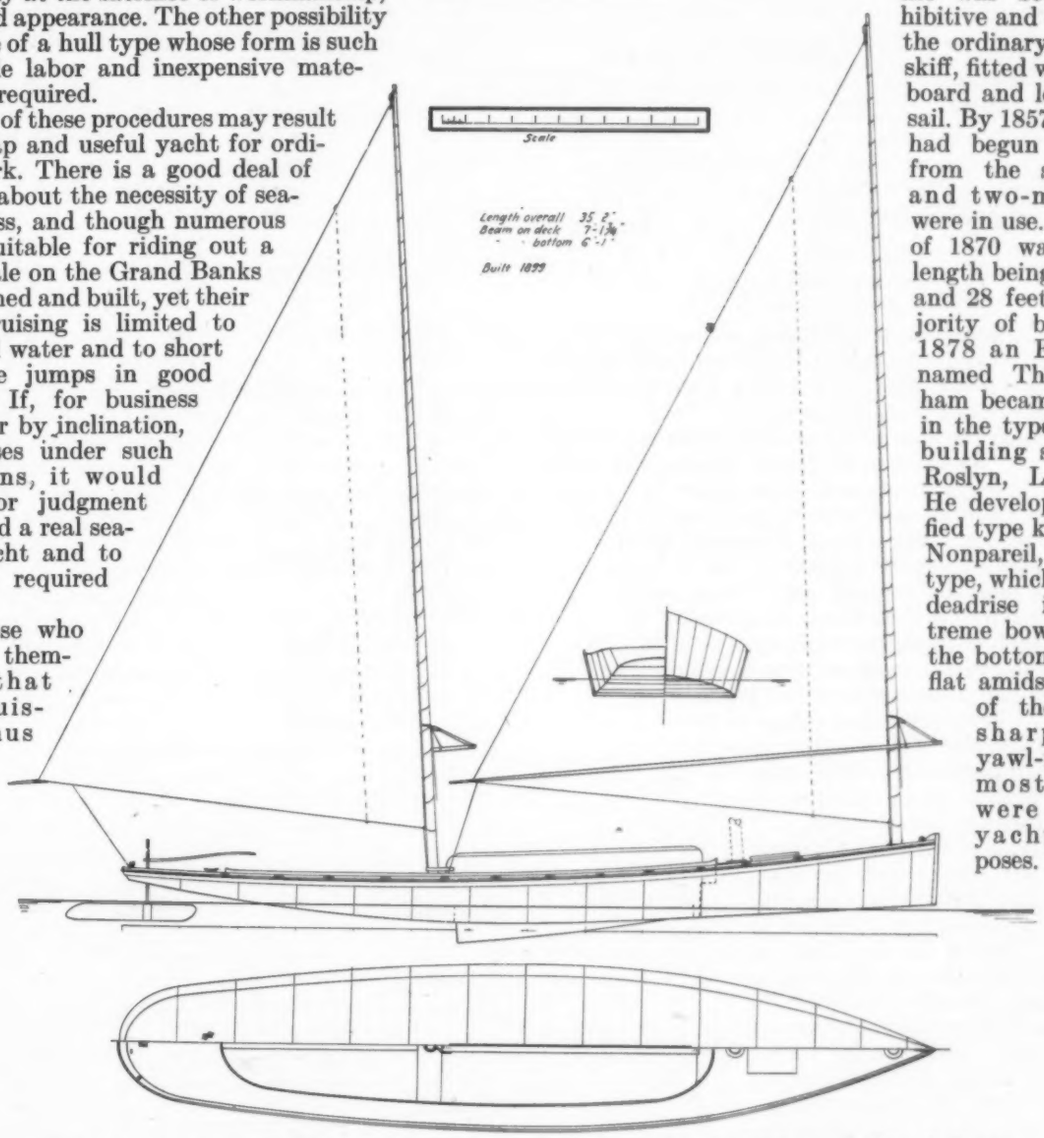


Fig. 1. Lines and sail plan of New Haven sharpie built by Lester Rowe, a well-known builder of sharpies

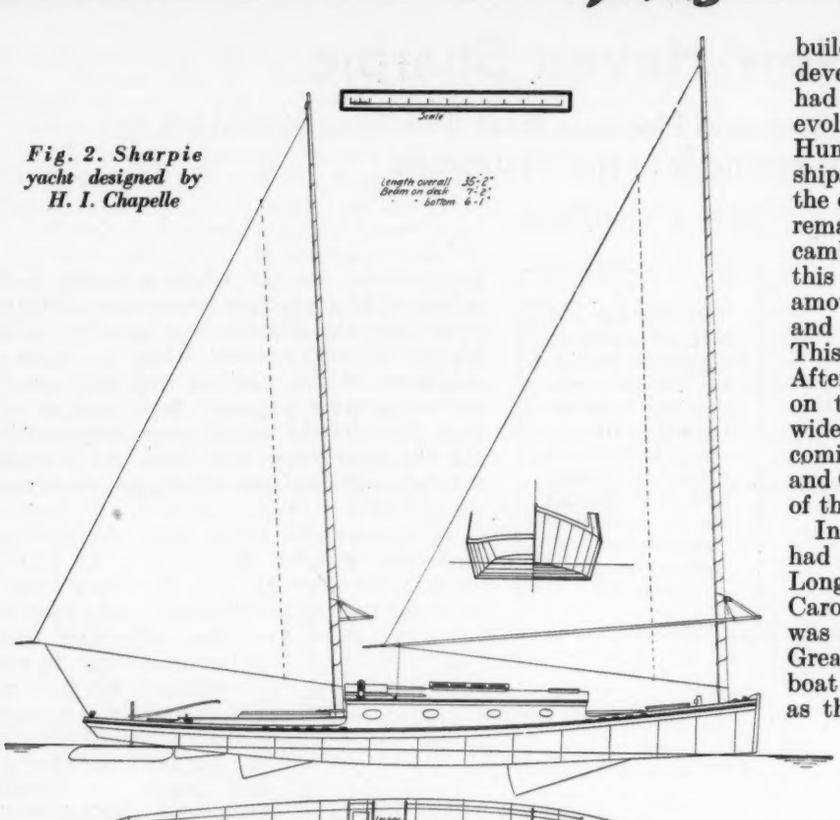


Fig. 2. Sharpie yacht designed by H. I. Chapelle

building them on Long Island, and he, too, developed a modified type. Where Clapham had employed straight deadrise, which soon evolved into the skipjack or V-bottom, Huntington used a rounded bottom athwartships, retaining the flat sides and chines of the orthodox sharpie. The Huntington type remained a true sharpie, except for the slight camber in the bottom athwartships. Usually this was an arc of a circle amidships, the amount of camber being quite small there and decreasing towards bow and stern. This feature increased the speed in light airs. After the half-rater *Question* "cleaned up" on the Sound the Huntington type was widely copied. The *Question* marked the coming of the scow, and both Huntington and Clapham had a part in the development of this type.

In the meantime the use of the sharpie had spread with the oyster business from Long Island Sound to the Chesapeake, the Carolina sounds, and to Florida. Later, it was used in the West Indies and on the Great Lakes. There is no other type of small boat that has spread as rapidly and as far as the sharpie. R. M. Munroe introduced the type into Florida waters in the 1870's, and his well known *Egret*, a double-ender, is described in *The Commodore's Story*. This boat was probably the best seagoing sharpie

New Haven builder was Lester Rowe, whose boats were all true sharpies and who is said to have turned out the fastest one ever built. Most of the New Haven builders turned out commercial craft only.

Oddly enough the sharpie as a yacht became popular abroad before it became so at home. During the early seventies, a Frenchman named More made two visits to Long Island Sound, each time taking home a small sharpie, the second being a small Nonpareil sharpie. These two boats were the subject of much attention abroad and their speed resulted in many yachts being built on their lines. As a matter of fact, the French government built some 40-foot sharpies, armed with a small revolving cannon on top of the house, for use as patrol boats in the colonies. These were exact copies of the New Haven sharpies of the eighties, except for increased beam and displacement. Even the peculiar rig of this date was duplicated in these patrol boats.

Eventually, the Americans became interested, the controversy between keel and centerboard adherents having caused a widespread interest in new types. During the eighties and nineties the sharpie yacht became very common, usually, however, in more or less modified form. A number of the sharpie yachts were rather large, many being of the Clapham type, rigged as yawls or schooners.

During the nineties Larry Huntington began playing with sharpies,

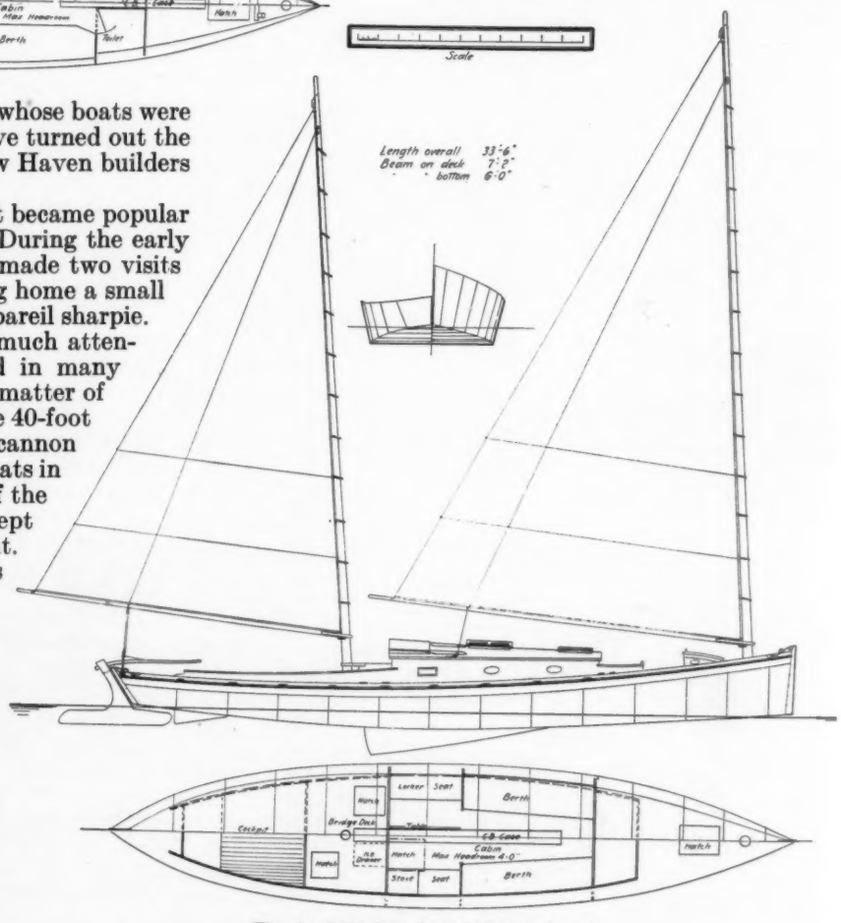


Fig. 3. A 33-foot sharpie for yacht use

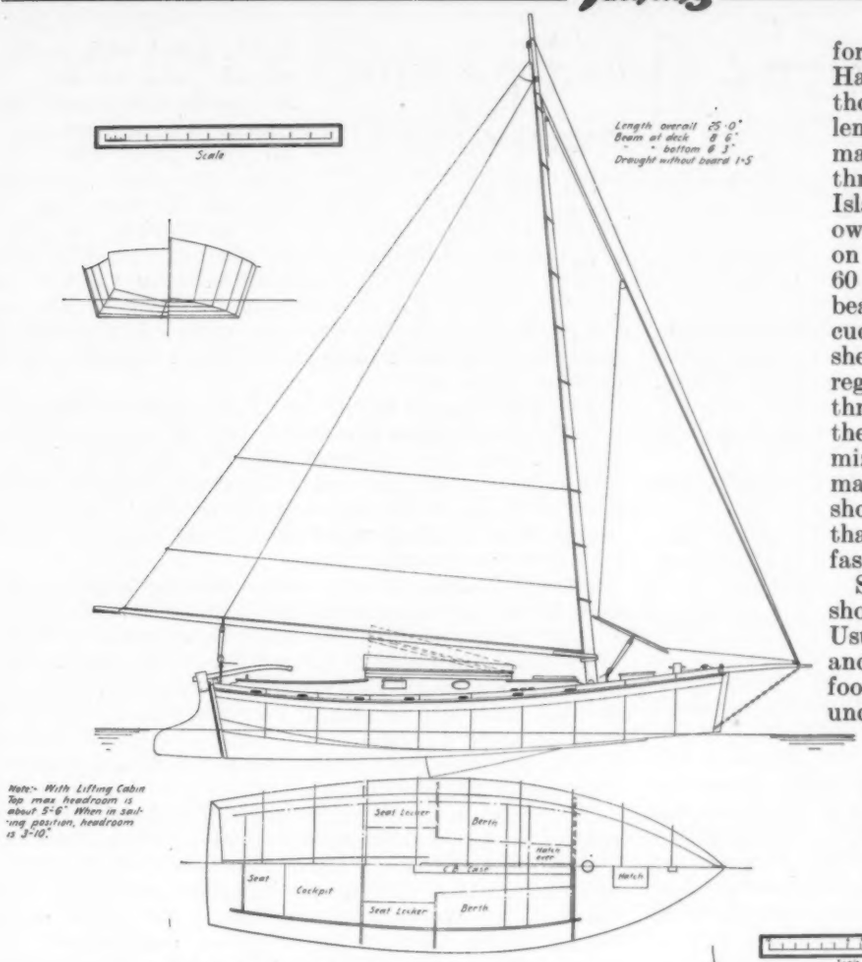


Fig. 4. Hampton Flattie type of sharpie yacht

type yet evolved. Most of the commercial sharpies in Florida waters were schooner-rigged, while on the Carolina sounds the New Haven hull and rig remained unchanged for many years. Eventually, the Carolina builders adopted the schooner rig, but retained the New Haven hull with the straight, upright stem. The Florida sharpies generally used clipper stems. While the gaff rig was occasionally employed, the leg-of-mutton was the most common. The sharpie has had many uses, having been gainfully employed as oyster boat, sponger, mail boat, cargo boat, Spanish mackerel fisherman, Cuban gunrunner, and, more lately, even as a "Bootie."

Obviously, the sharpie had excellent qualities to bring it into such widespread use and to have outlived so many other types. Hence the type seems worthy of careful attention. In 1928 the lines of a New Haven (or Fairhaven) sharpie (Fig. 1), one of the last and best of Lester Rowe's sharpies, and chosen by his son, were taken off. The two-masted rig is rarely seen now, even in New Haven. The foremast is usually placed in the middle step, just forward of the centerboard case, and the boat is steered with an oar in place of the rudder. With this rig a crew of one is all that is required, though two or more men were formerly employed in each boat when oystering.

Fig. 1 shows the sharpie in its best form, as an oyster boat. In size, the New Haven sharpies are about 35 feet long, though they have been built up to lengths of 60 feet or more. An old oysterman told me that a 60-foot sharpie, with three masts, had been built on Long Island in the early nineties for Carolina owners. She was lost through collision on her way south. As described, she was 60 feet overall, 9 feet 10 inches extreme beam, and was flush-decked. She had a cuddy forward, and a low house aft; she steered with a wheel and had a regular sharpie rig, except that she had three masts. The mainmast was tallest, the foremast next in height, and the mizzen was shortest of all. The mainmast was 48 feet long, there being a short club on each sprit. It was claimed that this sharpie was extraordinarily fast on the wind.

Several 60-foot sharpie yachts that showed great speed have been built. Usually they had schooner or yawl rigs and were of the Nonpareil type. A 40-footer is reported to have made 14 knots under favorable conditions, for a number of hours.

The faults of many sharpie yachts lay in disregard of the requirements of this particular hull form. As in the case of so many types, to design a sharpie properly demands a

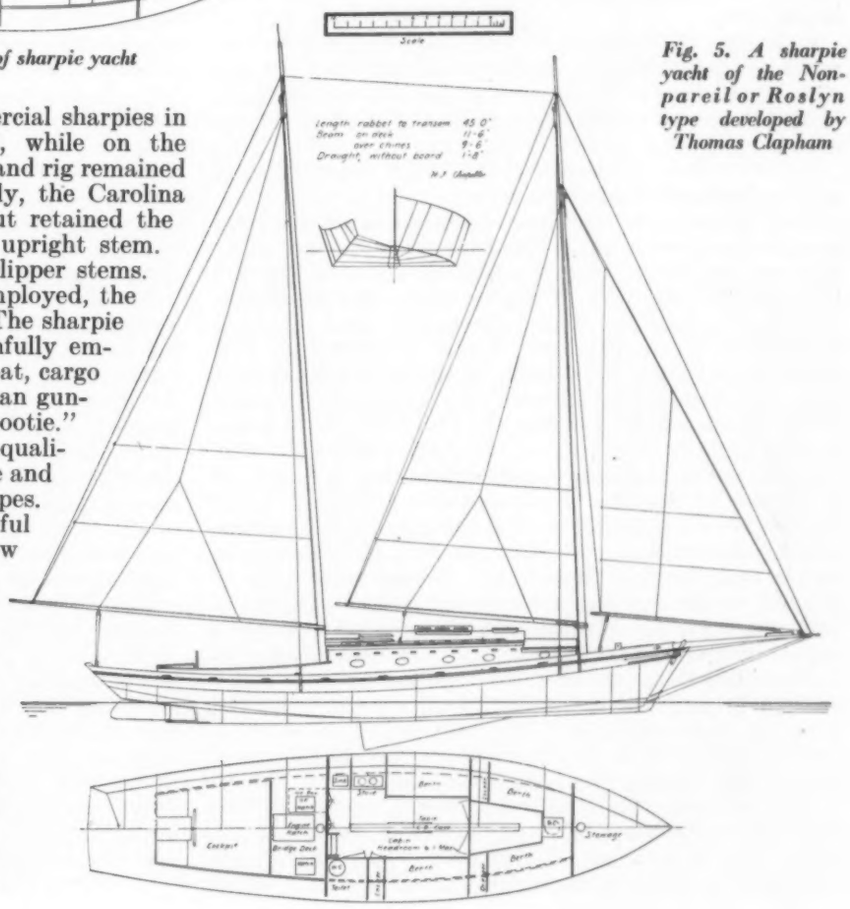
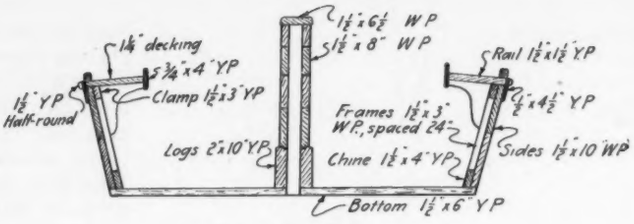


Fig. 5. A sharpie yacht of the Nonpareil or Roslyn type developed by Thomas Clapham

knowledge of its peculiarities. There are certain fixed rules in sharpie design and these can be broken only under certain conditions, which are met in the modified types only. It should be remembered that most boat types are developed by means of trial and error, over a period of years, hence modification must be made only after considerable study of the type. In the sharpie this is markedly true; seventy years of continuous evolution cannot be disregarded with impunity.



Typical New Haven Construction

The rules for sharpie proportions and form are approximately as follows:

1. The beam on the bottom should be about 1/6th the overall length.

2. The flare amidships should be 3½" to 4" per foot of depth — less if speed alone is desired, more if seaworthiness and safety are the important factors.

3. The freeboard should be low, but a rather strong sheer is highly desirable.

4. The displacement must be as light as possible, with the usual sharpie construction; outside ballast, heavy keels, and heavy displacement must be avoided.

5. The chine line, in elevation, must appear as follows: the heel of the stem should be above the water line; the chine runs straight for about one-third the overall length of the hull abaft the stem, sloping downwards toward the midsection. The chine then curves gently to the point of greatest draft, and runs upward to the stern in a flat, gentle curve. A long run is important.

6. A light rig is necessary for safety. Due to the narrow beam and lack of ballast, the multiple-masted rigs with low centers of effort are best; one-masted sharpies, of the proper proportions of hull, are not sufficiently canvased for high speed in light airs.

For the best results in the sharpie type the hull weights and spars should be light.

If it is desirable, because of accommodation or rig requirements, to increase the beam, some deadrise, at least in the run, is necessary. This was done in the Chesapeake variation of the sharpie, the Hampton Flattie. Clapham introduced deadrise at both bow and stern in order to employ a larger displacement and more beam than is permissible in the pure New Haven type. It is commonly supposed that deadrise in bow and stern will prevent pounding; however, this is not the case in any of the sharpie or skipjack types. While the sharpie will pound only when upright, the skipjack, if given enough deadrise to prevent this will pound when heeled. The Chesapeake skipjack has little deadrise, and is sailed on her chine, like the New Haven sharpie, as the builders have found that a deadrise of over 25 degrees to the horizontal hurts the sailing qualities of the type. All modifications of the sharpie are more expensive to build than the parent type, and it is doubtful whether the extra cost is warranted in most cases, though in large sizes the Nonpareil type permits the greatest accommodation. The excuse for either Nonpareil or Flattie is the increase in the displacement permissible, without an increase in length.

The two-masted rig, shown in Fig. 1, is typical. The masts have no shrouds or stays. The diameters of the masts are: at partners, 6"; at head, 1½". The sprit is supported at the heel by a snotter and tackle. A single block, fitted with a side shackle and becket, is strapped to the mast; the snotter is a pennant with an eye spliced into one end, the sprit passing through the eye. This is also fastened to the mast by the same strap as the block. The tackle is spliced to the becket on the block and rove through a slot or hole in the heel of the sprit, then back through the block, belaying to a cleat on the mast.

The masts must revolve in their steps and there is usually a brass plate fastened to the heel of each mast, another being placed in each step; these act as bearings. The sails are reefed parallel to the masts, the sails being lowered to tie in the reefs. In the old rig there was a vertical batten which was hauled to the mast by brails instead of reef points.

Sharpies usually have no skegs, and use balance rudders, which are fitted to lift by fixing a pin in the stock at the desired depth. The centerboard must be very long, which is an objection, as it invariably cuts up the cabin arrangement. Two smaller boards can be used if desired. In length the single board should be equal to about one-third of the overall length of the hull. In this 35-foot sharpie, the centerboard is 10′ 4″ long, about 3′ 0″ wide, and 2″ thick.

The construction is very simple. The backbone consists of the long centerboard case, and a log keelson aft. This is made of three 2″ by 8″ timbers on edge, tapered aft. The sides are wide planks; usually 3 or 4 strakes are used. There is no rabbet on the stem, the planks being fastened to a triangular stem piece, and beveled together, the whole being covered by a brass plate serving as a cutwater. The stern, if square, is set with a strong rake; if round, as in the boat shown, it is stayed vertically with narrow stuff, on two stern frames. The bottom is always cross-planked, fastened to the sides and to chine logs as well. A sheer clamp is employed, cleats taking the place of frames. Oyster boats have but one bulkhead, just forward of the centerboard case. Stock of 1½" is used throughout, mostly white pine; as a rule, the bottom is of yellow pine.

The sharpie yachts shown in Figs. 2, 3, 4 and 5 were based on the sharpie in Fig. 1. Holding very closely to the original, Fig. 2 shows a yacht of the New Haven type. The only changes were in the stern, which was deepened, and the displacement had to be increased to bear the extra weight of cabin, house and fittings. Double centerboards are used to permit a comfortable cabin arrangement, entailing some extra cost. A small skeg is shown but this can be omitted if weeds are not often encountered. This sharpie should be quite fast, and is suitable for protected waters. Her headroom is about the maximum for this length, 4′ 0″.

Fig. 3 shows a more seagoing type. She is based on Commodore R. M. Munroe's fine old double-ender *Egret*, and is designed along lines suggested by him. She is suitable for a single-hander and for beaching, and is as simple as possible. Her sails are fitted with booms, but no standing rigging is required. A berth can be fitted in the fore peak. This sharpie is on New Haven proportions, but the round stern is replaced by a sharp one. The skeg can be omitted, if desired, and an inboard rudder post, as in Fig. 2, can be used. Her headroom is also 4′ 0″.

(*Continued on page 102*)

You Can't Legislate Sportsmanship

Something About the Strange Happenings in the Col. Green Trophy Race at Miami

By GEORGE W. SUTTON, JR.

IT WAS about nineteen years ago that I first ran amok on the subject of motor boat sportsmanship. That was when the American Power Boat Association married the Mississippi Valley Power Boat Association. The mid-western bride, now divorced, brought a splendid gift with her — the 151 hydroplane, the "poor man's boat." This lively little craft, usually home-built, produced the best racing ever seen in this country. The class is now on its last legs, suffering from the cancer of commercialism. To offset this splendid contribution, however, she brought, as part of her dowry, a strange looking jewel called "cash prizes" which has had about the same effect on our motor boat racing as Eve's apple has had upon our conduct in other matters.

At that time, being young and innocent and assistant editor of one of the great journals of nautical knowledge, I could not, for the life of me, see how cash prizes could become part of an amateur sport. Now, older but just as innocent, I am still seeking light on the subject. All of which brings us around to the strange happenings during the running of the Colonel Green Star Island Trophy race in the recent Miami Beach Regatta.

As you may know, we have expended great efforts in these columns and elsewhere during the past year to unscramble the international racing rules and to build up the utmost good feeling between our racing gentry and those of other lands. Partly through these efforts, the Miami Beach Regatta which, through excellent management, has become the most glamorous event of the annual winter season, was honored by the presence of Charles H. Harrison, England's leading outboard pilot, and Edmundo Turci, an Italian naval officer with an astounding war record and a somewhat less effulgent experience as an outboard driver. Against them were pitted some of the most skilful of our drivers, including some with world's records to their credit.

The result was a miserable mess which has caused many serious people to wonder again about the sportsmanship in our motor boat racing. Harrison, with an American engine and an American-designed, British-built hull, had no trouble getting second place in the first two heats which rendered it necessary for him to finish only third or fourth in the final heat to win this most important trophy. Instead, surrounded by a group of drivers who had no chance of winning, he was disqualified, along with seven of the others, for beating the gun over the starting line. Two of the drivers lay back, loafed around the course, and one of them, through the disqualification of Harrison, walked off with the trophy.

Immediately the minds of the A.P.B.A. officials present flew back to a similar incident on the Detroit River last September. An investigation was started by George Townsend, president of the A.P.B.A., C. F. Chapman, of the National Racing Commission, and others. The result was the disqualification of all nine American participants in the race until they can clear themselves of the suspicion that they deliberately lured the Briton over the line.

In the meantime, Turci was having trouble with his motor. In trial spins it ran so fast that the best of the American drivers could not keep up with him. In all three heats of the Green Race it sputtered and stalled and finally quit for good. An investigation showed that somebody had inserted a copper wire in the ignition cable, causing intermittent short circuiting, and had clipped off the ends flush with the insulation so that the wire was completely hidden.

How this thing will come out, I do not know. The final decision of the A.P.B.A. on the future status of these drivers must wait until some of them arrive in New York for the Albany-to-New York Race. In the meantime distinct evidence of a definite plot has been uncovered and some of them may never be allowed to race in a sanctioned regatta again. This, if it is based on positive proof, will be a splendid thing for the sport generally. There are several groups of professionals, known throughout the motor boat world as "tramp drivers," who wander from regatta to regatta, living entirely upon the cash prizes they win. This, in itself, is an unhealthy condition, although a majority of these drivers are thoroughly honest and repay their small earnings by providing legitimate thrills for the crowds. Wonder has arisen as to why drivers should resort to crookedness in a race in which only one year's possession of a trophy is at stake. Perhaps this was not generally understood. The day after the race the winner called up Mr. Chapman to enquire when he was to receive the money he thought he had won.

The identity of the person who tampered with Turci's ignition is almost impossible to discover. It was a baneful deed, in more ways than one. He was using a new Laros engine of the highest, or Class F, size. In trials it seemed faster than any of the American engines. If the Italians are building better outboard engines than we are, our manufacturers are entitled to know it and to improve their products accordingly. The action of some individual has prevented this knowledge becoming ours until a later date.

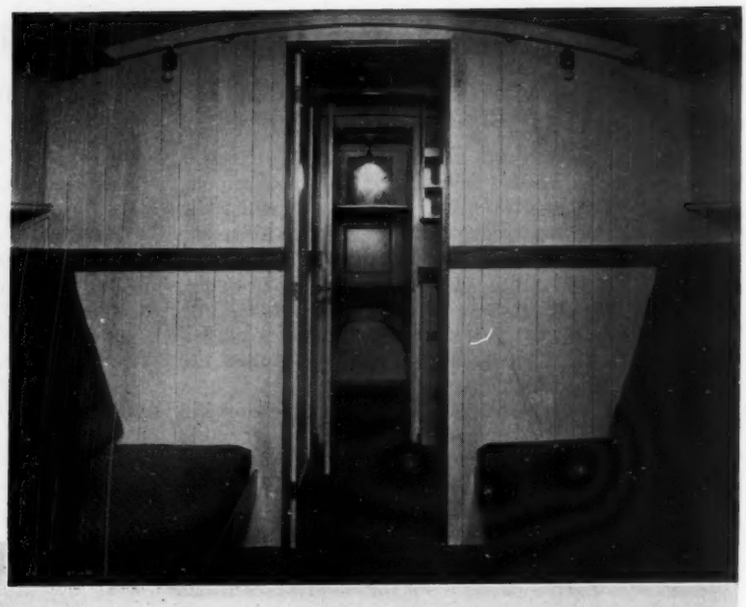
It seems to me that three statements, made immediately after the race, sum up this situation pretty thoroughly. President Townsend said, "It is outrageous to think that a foreign driver cannot be sure of a fair opportunity to race when he comes over here."

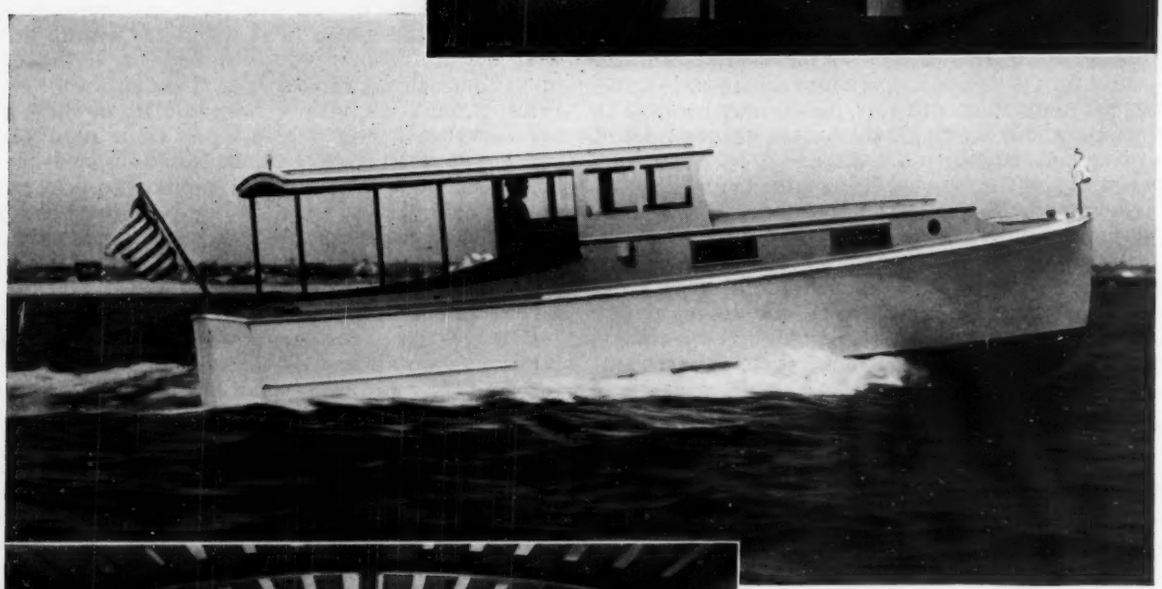
James W. Mulroy, secretary of the National Outboard Association and of the National Outboard Racing Commission, said, "Sporting events continually demonstrate the fact that sportsmanship cannot be legislated into the participant and that attempts to adhere rigidly to the rule and line are futile if the participants don't want to play that way. Bitter experience has proved the unfortunate fact that there are some outboard drivers who are shortsighted enough to throw all sportsmanship and common sense to the winds in order to vent spite on some fellow driver. Officers and members of the N.O.R.C. do not intend to see a small group of irresponsible youths place American boating in a bad light in the eyes of our foreign associates. The adoption of a decent code of ethics is the only salvation for the sport, if such an incident is not to be repeated. Legislated honor is about as effective as weak tea, and it's about as tasteless, too."

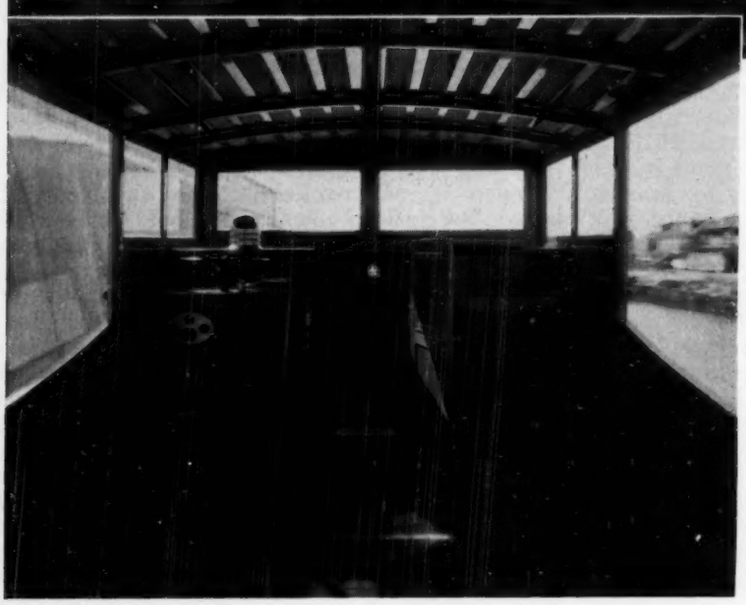
(Continued on page 104)

"Nancy"

A 34-Foot All Purpose Cruiser







"Nancy," designed by Eldredge-McInnis, Inc., was built by Staples, Johnson and Company, of Biddeford, Maine, and is one of their newest Gloucester stock models. With her painted superstructure and sturdy seagoing lines she represents the modern trend toward simplicity and ability in cruisers. Her finish not only makes her practicable but gives her a ship-like and shipshape appearance. The spacious cockpit will comfortably seat a large party and is built to stand hard usage, as is every other part of this solid cruiser. Below, she is laid out in two cabins with a good sized toilet room and handy galley between. The accommodations provide for six. A Buda engine drives her 14 m.p.h.

Photo by Rosenfeld

The 65-foot over all schooner "Brilliant," recently completed at the Nevins' yard, City Island, for Walter Barnum, of New York. She is from designs by Sparkman & Stephens, and is expected to sail in this year's Bermuda race

The Month in Yachting

Active Racing Season Forecast for New England

INCONGRUOUS as it may seem in these parlous times, the race committees of four score yacht clubs between the Connecticut River and Mt. Desert are busily plotting schedules for what, from this distance, looks very much like the liveliest racing season that New England has known since Robert Bennett Forbes, of Boston, and John C. Stevens, of New York, initiated competitive pleasure craft sailing in America, not quite a century ago. A description of that historic brush between the *Sylph* and the *Wave* in Vineyard Sound on August 3rd, 1839, appeared the next day in a New Bedford newspaper, probably the first story of a yacht race to be printed in the country.

It is quite true that a large number of the larger racing yachts will be out of the picture this summer, although *Vanitie* and *Weetamoe* will race at every opportunity, as will the three Bar Harbor 31-footers, the ten 25-raters, and the eight 30-Square-Metres at Marblehead; the ten Herreshoff "29s" and the eight new "23s" at Fisher's Island; the trio of 25-raters and the quartette of 30-Square-Metres at Marion; and the sextette of "30s" at Northeast Harbor. The rest of the New England racing fleet will be made up of yachts under twenty feet and a very large majority under 15 feet water line. This summary does not include, of course, the auxiliaries, of which, it is estimated, about sixty per cent will be in commission.

Undaunted by seemingly adverse conditions, at least three new yacht clubs will be organized late in June, one at Monument Beach at the head of Buzzard's Bay, another at Hull, and a third in the little hamlet of Conomo, across the river from Annisquam, all with the avowed purpose of sending crews of youngsters to the qualifying rounds for the Sears Bowl. Several other clubs, such as those at Kennebunkport, Prout's Neck, and Boothbay Harbor, aroused by the success of the junior championship at Rye, N. Y., last summer are seeking to enter the Mt. Desert Association with similar intentions.

It also transpires that Father and Uncle Ned, whose power boats gave us so many pleasant trips down the bay or out to the point last year, do not propose to join the Rocking Chair Fleet, nor become beachcombers merely because their cruisers will remain under the covers, but are sniffing the racing air and conniving to seize, purloin or otherwise acquire as many junior craft as they need for their racing proclivities. There is likely to be many a heated argument 'round many a breakfast table this summer as to who is to sail the family 12-footer that afternoon.

The gold loving cup presented to the late Sir Thomas Lipton in 1899, at the time of his first challenge, by his American friends. It was turned over to the New York Yacht Club last month in accordance with the terms of the will of Sir Thomas

Owing to the uncertainty regarding the major racing boats, both the Eastern and New York Yacht Clubs concluded to wait until well along in the present month before deciding on the annual cruise, but it is generally believed that neither of them will give up these traditional jaunts on the New England Coast. There have been but few years since the initial voyage down Long Island Sound in 1844 that the New York Yacht Club has not held its cruise. Newport expects the New York fleet to arrive this year during the third week in August, and the races off Brenton's Reef for the Astor and King's Cup will be sailed at that time. It is likely that the Eastern Yacht Club fleet will cruise about Massachusetts Bay early in July, visiting Provincetown and Gloucester, and preceded or followed by the annual regatta off Marblehead for the Puritan Cup. The Narragansett Bay Regatta Association is offering a series of races for major craft off Newport, about halfway between the Eastern and New York Yacht Club Cruise.

The racing fleet in New England the coming summer will be augmented by eight new Herreshoff 23-footers for Fisher's Island, and one for Manchester, Mass., by three of the Curry boats for Wianno; three four-year-old

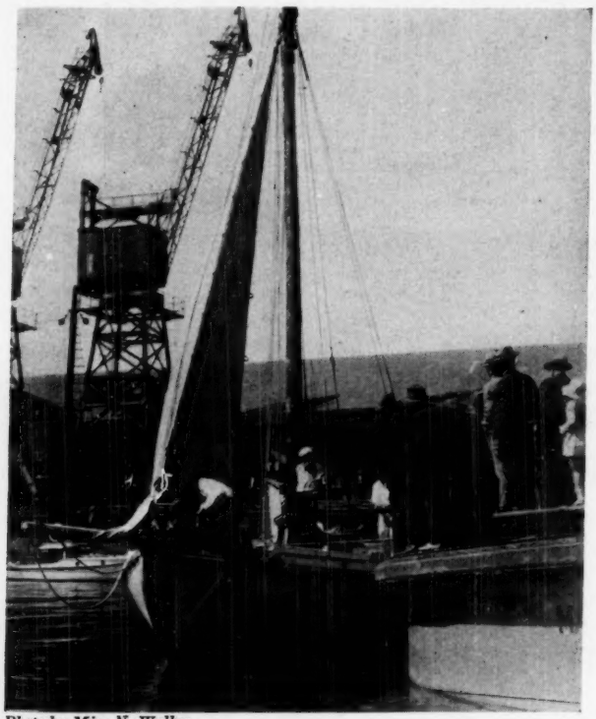


Photo by Miss N. Walker

The Norwegian double-ender "Teddy" in Auckland Harbor just before she started on her return voyage to Europe on which she was wrecked on the New Zealand coast

25-raters of Class Q boats, and four new 30-Square-Metres designed by L. Francis Herreshoff for the Beverly Yacht Club; four 22-Square-Metres, built in Sweden two years ago from designs by Estlander, for Hingham; and a couple of 30-Square-Metres for Northeast Harbor. Four of the Manchester 18-footers, built eight years ago, will race at Rockport as a new class for the Sandy Bay Yacht Club. The Cape Cod Baby Knockabout classes at Point Judith, and Boothbay Harbor will be increased, as will the Wee Scots at Sorrento and the "Indians" at Kennebunkport. The rest of the New England fleet will remain about as it was last year.

In addition a number of larger organizations will stage open regattas for various types or sectional contests for the junior championship. All these organizations will carry on as usual this year, and another association will be formed to take charge of the Massachusetts North Shore Junior Championship for the Charles P. Curtis Cup.

W. U. Swan

A Busy Season Ahead for Barnegat Bay

FEATURED by the seventh annual International Challenge Sloop series with Canada in the bilgeboard scows and the fourth annual Bamberger Series for the International Star Class, the 1932 season on Barnegat Bay bids fair to be the most comprehensive in over thirty years of active yacht racing.

A rough count of the various regattas reveals that no fewer than 160 interclub contests will be competed in by yachts of seven classes flying the burgee of one or another of the member clubs of the B.B.Y.R.A. In addition, the various clubs will hold their own local contests during the summer, some of them staging bi-weekly races.

The usual eight-race series with the Royal St. Lawrence Yacht Club of Montreal will be held on Lake St. Louis on July

"Snow Bird," the 11½-foot dinghy which has been "cleaning up" in the recent Frostbite regattas. She is from designs by C. D. Mower, and is a particularly sweet and attractive little boat

30th and 31st, and at Seaside Park on Barnegat Bay on August 27th and 28th. As in the past, the "E" scows will be raced in Jersey waters and the "B" sloops at Montreal.

Star sailors from Long Island Sound, Gravesend Bay, Delaware River, Chesapeake Bay, and the new South Jersey Fleet at Ocean City have already entered for the fourth annual open

Architect's drawing of the proposed motor boat basin being planned for the new Marine Park, Brooklyn, N. Y. It will provide permanent berths for 1400 motor boats

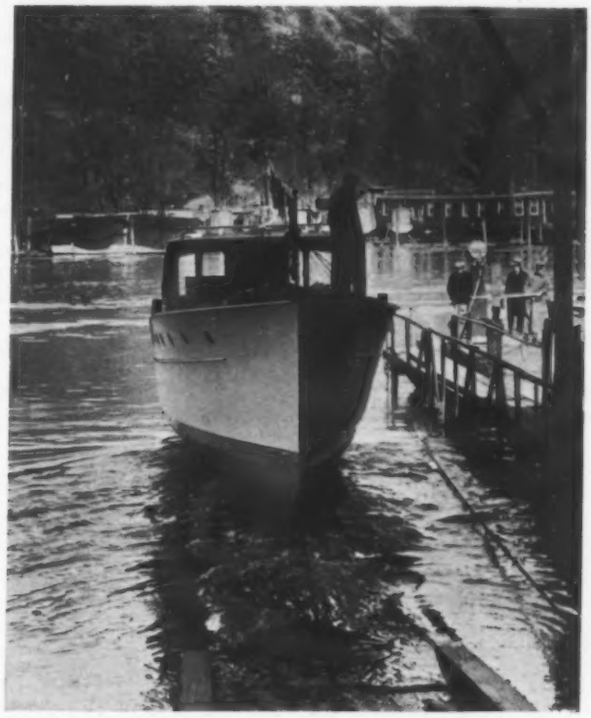
series for the Bamberger Trophy. Three races, on September 3rd, 4th and 5th, are expected to attract the largest entry list on record for an inter-fleet event on Barnegat Bay.

At its recent annual meeting the B.B.Y.R.A. abolished all restrictions on haul-outs during the racing season, and changed the procedure in handling the Saturday regattas so that course signals shown from the committee boat will displace printed courses hitherto distributed immediately before the start of the races each day.

CHARLES E. LUCKE

Photo by E. Levick

The new Six-Metre "Nancy," built for a Seawanhaka Yacht Club syndicate for the British-American Cup team match this year. She met the Bermuda "Sixes" in the recent races for the Prince of Wales Cup



Launching of the new 55-foot fast cruiser "Lucky Strike," owned by DeCourcy L. Hard, of Cedarhurst, L. I. She was designed and built by the Consolidated Shipbuilding Corp. With two 180 h.p. Speedway motors she made 25 m.p.h. over the Hudson River measured course

Norwegian Yacht "Teddy" Wrecked on Coast of New Zealand

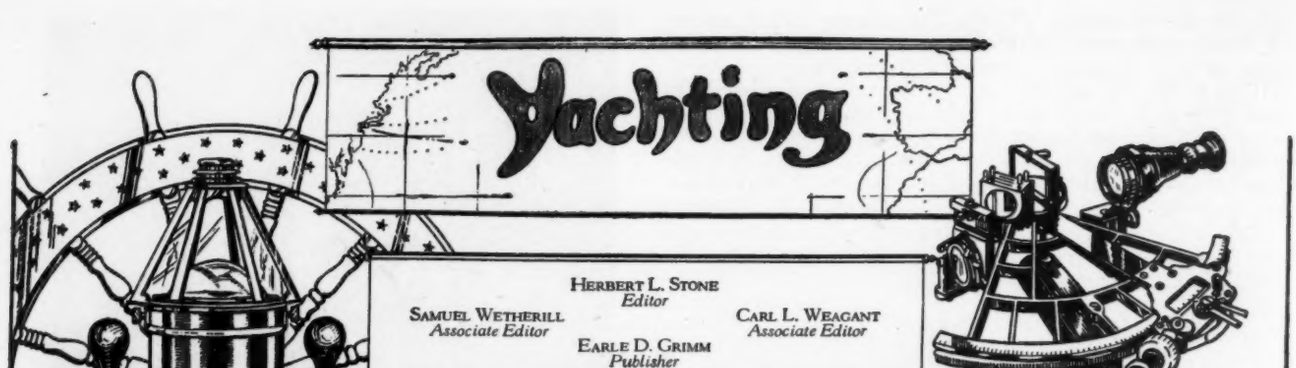
THE Norwegian double-ender *Teddy*, which recently completed a voyage from Norway to Australia in charge of her owner, Erling Tambs, was wrecked on Challenger Island, off Auckland, N. Z., March 10th, while on a passage from Auckland to Brisbane, and became a total loss. The owner, his wife, and their two children, aged, respectively, three years, and eleven months, were saved after a trying experience. As told in a previous issue of YACHTING, both the children were born during the long four-year voyage.

After leaving Auckland on March 8th, the *Teddy* took shelter in Bon Accord Harbor, Kawan, during a heavy gale. Getting underway again March 10th, she was sighted that morning by a steamer near Challenger Island. Shortly thereafter the 27-ton craft was set ashore by the heavy swell left over from the gale. She was driven hard on the rocky coast, her boom broke, and the seas washed over her. Her crew was rescued by a passing motor boat, Mrs. Tambs being badly bruised and cut, while the owner received a severe cut in the leg. At the time of the mishap the *Teddy* was proceeding out of the south passage in a light head wind, with a strong swell setting in. She missed stays and was set ashore before she could gather way again.

The little vessel was, at the time, on her return voyage to Norway, and her owner and his family lost everything. An account of the outward voyage appeared recently in the *National Geographic*. The *Teddy* was formerly used as a pilot cutter. She was of the Colin Archer double-ended type.

Photo Bermuda News Bureau

Finish of first race of the 1932 season between the Sound Interclub and Bermuda One-Design boats, won by the latter in Bermuda waters. "Poppy" leading "Bee"



EDITORIAL

Motor Boat Registration Increases

IN SPITE of the fact that the year 1931 saw the United States, together with the rest of the world, in the clutches of the worst industrial and financial depression within memory, the use of motor boats for both pleasure and commercial purposes showed a very healthy increase. This is a most encouraging portent for the future.

Recent figures published by the Department of Commerce on the number of registered motor boats, which does not include those large enough to be documented, or those outboard boats under 16 feet in length, show that there was a gain of 10,083 registrations in 1931 as compared with 7,408 in 1930, an increase of 2,675. The total of such registered boats on Federal waters is 258,531, or over a quarter of a million.

The New York district showed the largest registration, although the greatest percentage of increase in motor boats for the year was recorded in the ports bordering the Gulf of Mexico. In the New York district it is interesting to note that the stock runabouts and cruisers used for pleasure purposes account for the greatest increase during the year, these two classifications totalling 523 new boats, while the custom-built boats (the product of the yacht building yards) accounted for 304 launchings in the district. It will, perhaps, surprise many of us to learn that 341 of the new boats launched in this district were built by amateurs for their own use. These were, undoubtedly, the smaller boats, principally for use with an outboard motor. This shows the hold boating has on those who must count the cost of their pleasure. It is, however, a healthy sign.

An Appeal to Yacht Owners

FOLLOWING our plea last month to yachtsmen to keep their boats in commission this year, we print below a letter from the United Action for Employment Group on the same subject. This appeal should set at rest any fear of criticism of such expenditure at this time. The letter follows.

"The United Action for Employment Group of the American Federation of Labor, the American Legion, Legion Auxiliary and the Association of National Advertisers, has spread its job-seeking activities into the entire boating field in an effort to provide employment for thousands of men who are dependent upon the boating industry.

"We are appealing directly to all yacht owners to place their craft in commission this Spring. Approximately ninety percent of the cost of overhauling a boat is paid out for labor.

"This immediate benefit to the boat yards, their employees and the allied trades affected by the purchase of supplies, does not end with the commissioning of your boat. The operation of the usual number of pleasure craft on our waterways this summer will mean the employment of thousands of men who each year look to the boating season for their chief means of support.

"We urge you to use your boat this season and if you are in the market for any new equipment, do not hesitate to buy. Many boat building concerns have reported that orders for new boats are being held up because of fear of criticism for such expenditure at this time. * * * May we count on your coöperation in our 'anti-boat hoarding' campaign?

CARL BYOIR,
Director of Organization"

More International Discord

THAT was a nasty mess at Miami in the race for the Colonel Green Trophy at Miami last month. On the first appearance of foreign pilots in an outboard title event in the United States our drivers might have been more concerned in seeing that the visitors got a fair break than in trying to keep a certain trophy here, fair means or foul. Still, nothing has been proven yet. That's the nasty part about it — that we have to *prove* afterwards that we are not crooks when it comes to international power boat racing. It may, of course, have been just overanxiety on the part of those who helped to pull the English contender across the line before the gun. Let's hope so. More odium attaches to the charges of surreptitious tampering with the motor of the Italian representative. This, if true, puts the perpetrator of this kind of sabotage in the class with "second story men."

Truly this international sport is more apt to breed discord and misunderstanding, as many contend, than amity and good will.

IN THE WORLD OF YACHTING

HOBART FORD

HERE we have Hobart Ford, of Rye, N. Y., more familiarly known as "Hobey" wherever his latest ship, the "Mother Goose," pokes her nose and drops her gangway ladder overside. This year (as was the case last season) the "Goose" flies the vice-commodore's pennant of the Cruising Club from her single stub mast.

"Hobey" has been a hard case sailorman for so many years that he hardly needs an introduction, especially to Atlantic Coast "yachters" between Cape Henry and Nova Scotia. Able cruising boats are his vice, although from time to time he bobs up in a racing class, where he usually gives a good account of himself and his boats. We recall him first, shortly after the close of the Great War, poking around the New England Coast in his green 37-foot ketch "Cynosure II." Memory does not serve to name the boat he had before this one. After several years in this wholesome cruiser he had the schooner "Bertha Francis" built at Rockport, from designs by McManus, who was responsible for so many of the Gloucester and Boston fishing fleet. In 1926 he added the Interclub "Cynosure" to his fleet and raced when he was not cruising. Then he bought the 50-foot schooner "Wandee," and she was followed, in 1930, by the 48-foot cutter "Skal," which he had built and in which he raced to Bermuda that year. In other hands, this boat took second prize in the Transatlantic Race last year. A year or so ago he purchased and sailed the Six-Metre racer "Aphrodite," but he could not keep away from his early loves, the cruisers, and last year he startled his friends with the Chesapeake power-driven work boat "Mother Goose," which he claims "packs" more real comfort and ability in 65 feet than any other boat he ever owned. Certainly, as a hospitable flagship for the Cruising Club, she leaves little to be desired. His other yachting clubs are the American and the New York.

The costume in which you see "Hobey" is not his conventional sailing one, but he simply could not keep out of a Frostbite dinghy just because of his clothes.

Under the Lee of the Longboat

by Cap Stan

OUR Sound Interclubs took a licking from the Bermudians this year, their first in Bermudian waters since this international series started back in 1927. And our Six-Metre boats took another licking from the Bermudian "Sixes." From accounts of some of the participants, the Interclubs were licked because of a preponderance of light weather conditions, in which the Bermudians are admittedly faster. I haven't heard yet why our newest — and supposedly fastest — "Sixes" bowed to the older, foreign-designed Bermudian "Sixes." But it doesn't augur well for us in the British-American team races this summer on the Solent. As I recall it, we have never yet won a Six-metre team race against the British in British waters. Will history keep repeating itself?

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Anyone doubting that making a landfall on Bermuda is a risky business probably got a jolt a month or so ago when the newspapers carried accounts of the stranding and total loss of a modern, well-equipped and well-manned passenger steamer on the reefs surrounding the Bermuda Isles. The trickiness of this landfall lies in the facts that visibility around the Islands is so poor that they are invisible from outside the reefs, and that the currents encountered when approaching Bermuda are impossible to forecast with any degree of certainty. So far, we have been mighty lucky in the various races not to have some boat pile up on these reefs. Navigators can't be too careful, nor lookouts too watchful, in the last few miles of this ocean classic.

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That design of a "Quincy" in the last issue, by George Crouch, was mighty interesting from many angles. A lot of good points — easy to row or tow, a good sailer, and cheap to build. I wonder if George couldn't be prevailed upon to take the main elements of this design and work up a smaller, utility tender? Purely a row boat, around eight or nine feet long, which would carry a reasonable load, row well, tow well, and be light enough to stow on the deck of a fairly small cruiser? Of course, there are some boats which meet these requirements, but most of them are too expensive. A small Quincy might make an ideal tender for the poor man. How about it, George?

There was a young lady from Banker
Who slept while the ship was at anchor
She awoke in dismay when she heard the mate say
"Hoist up the main sheet and spanker!"
(Swiped from the *White Lake Y. C. News*)

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It was a pleasure to see that design of the Noman's Land boat in the last issue. First, because it is a fine thing to preserve the lines of a lost type for future generations to gaze upon, and second, because it showed what a fine craft the old-timers evolved by rule-of-thumb methods for a particular purpose. As one capable critic remarked: "Those builders may not have had much scientific training in the art of designing, but they certainly had an eye for a real boat — a quality which some of our modern naval architects seem to lack." And any good judge of boats will tell you that that Noman's Land boat was not only pleasing to the nautical eye, but a mighty fine piece of work in every way. And with as good a judge of boats as Bill Taylor telling us that she is as good as she looks, maybe some of our designers will get to work and turn out a cruising craft somewhat like her, with such modifications as would make her more adaptable to cruising rather than fishing.

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Why is it that foreign racing drivers can't come over here and race without an uproar being raised about unfair racing tactics on the part of American drivers? Right on top of the Detroit mess comes the unsavory news of all kinds of trickery in the outboard races for the Colonel Green Trophy — the starting clock was wrong, the motor of a foreign entrant was tampered with, and American drivers banded together to drag a second foreign entrant over the line before the gun. I wasn't there, but an unbiased onlooker has assured me that there was plenty of foundation for at least some of these charges. A prominent British yachting magazine has commented upon the affair, and opines that "unless anyone responsible for such malpractices is dealt with in a disciplinary manner and banned for all time from any future contests, American sportsmanship will fall into disrepute." Let's hope that such action is taken, and taken quickly, for the good of American sportsmanship and sportsmanship in general.

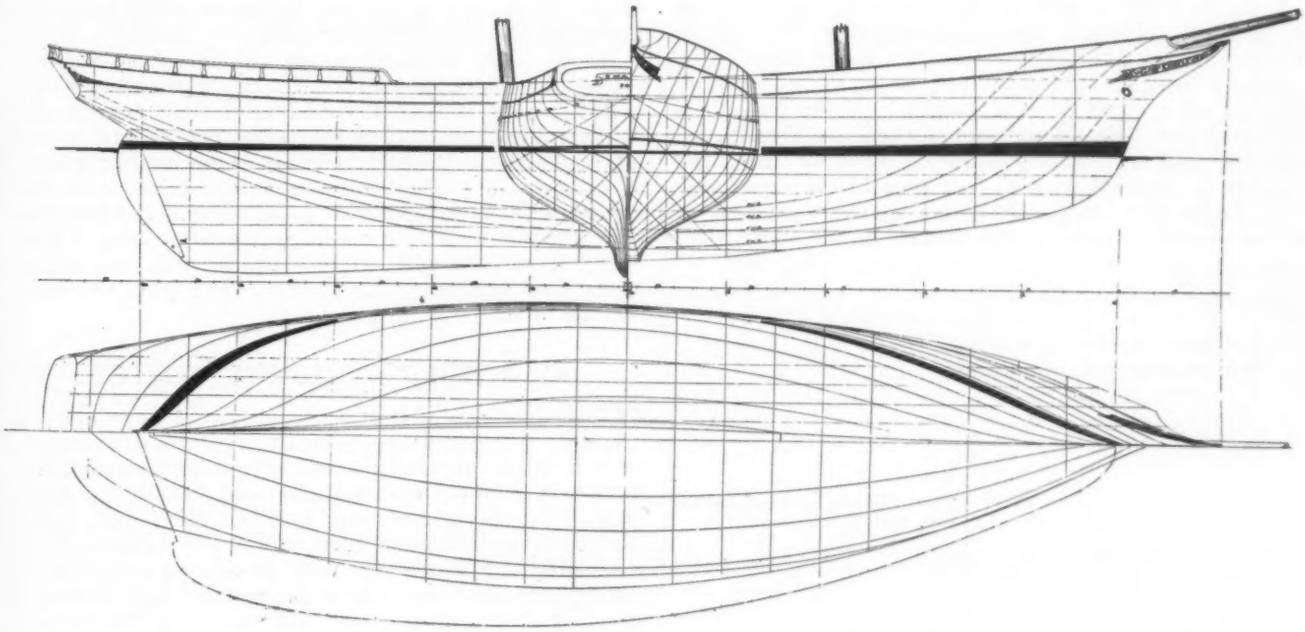
A Diesel-Powered Brigantine for Long Ocean Cruises

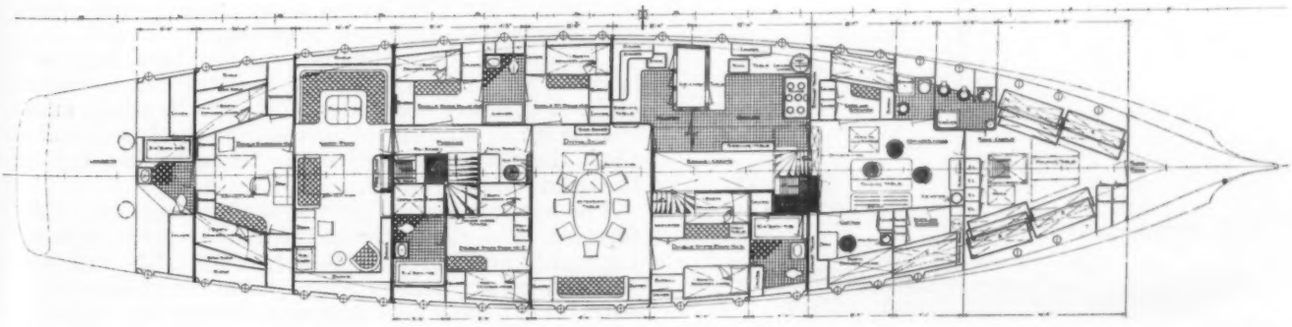
THE handsome brigantine whose plans appear on this page were drawn by Megargel and Gruber for a yachtsman who is a real lover of the sea and proposes to make lengthy voyages to the far corners of the globe. The hull is of a distinctly seagoing type, with ample beam and fine deadrise, while the brigantine rig was adopted because of its unquestioned efficiency on long runs in the Trades. There is enough fore and aft canvas to assure fairly good performance to windward. The dimensions are: l.o.a. 128′; l.w.l. 106′; beam, 28′4″; draft, 13′; displacement, 322 tons; sail area, 8200 sq. ft.

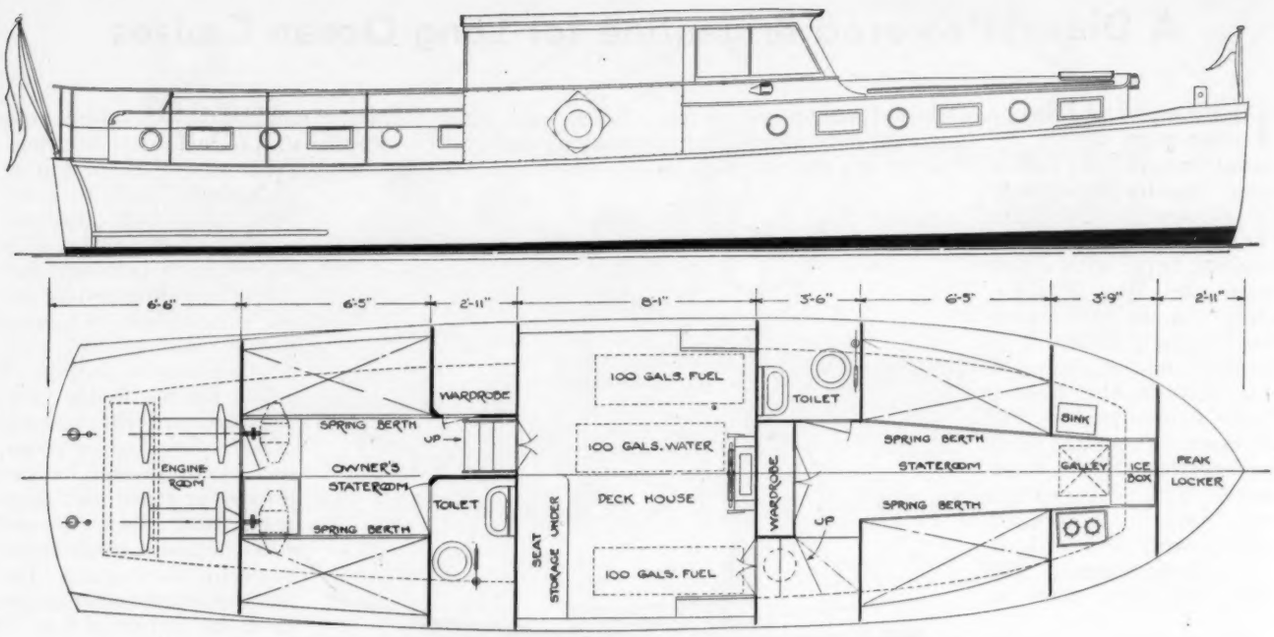
The main auxiliary power is a 260 h.p. Diesel motor, with fuel tankage sufficient for 4000 miles under power at a speed of over 9 knots. Two 10 k.w. Diesel generators will take care of electric lighting, ice machine, cold storage, windlass, sail hoists and other auxiliary machinery. An oil-burning heating plant will be appreciated in inclement weather.

The owner's accommodations consist of three double staterooms each with its connecting bath, and two single staterooms with shower bath between. Besides the dining and lounging saloon there is a large library, and a lobby with ample room for storage of guns, fishing tackle, etc. Forward are the pantry, galley, officer's mess room, and two double staterooms for mate and engineer, and steward and cook, besides a single stateroom for the captain. The forecastle has accommodations for a crew of 8 or 10 men, with officer's shower and toilet, and shower and toilet for the crew.

On deck, just abaft the mainmast, is a shelter cabin with companion, and between the masts is another deck cabin with chart table, radio equipment, etc.





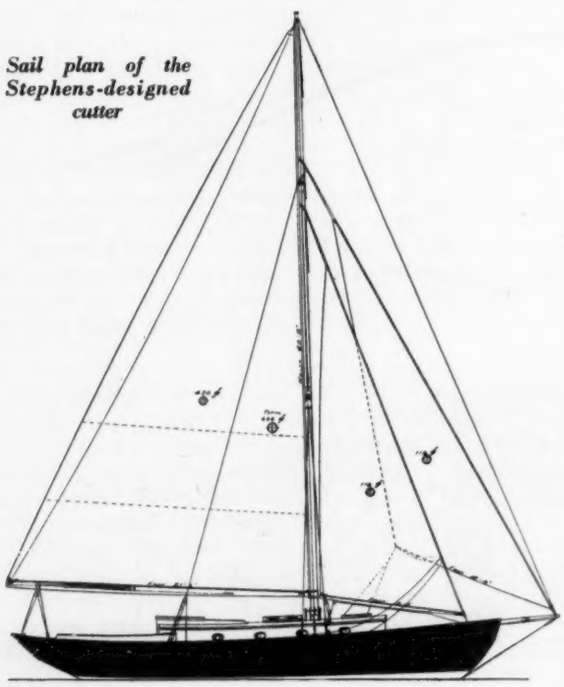


Outboard profile and cabin plan of the new Dawn 40-foot V-drive cruiser

The New Dawn 40-Footer, With V-Drive Motors

THE plans above show a worthy successor to the Dawn "30," a craft which has made many friends in its short existence. This newcomer, a product of the Dawn Boat Corporation, of Clason's Point, New York, employs the same system of twin screw, V-drive motors located aft instead of in the usual position under the bridge deck, whereby accommodations are greatly improved, and any noise, vibration or odor from the motors is confined to the after part of the boat, passengers on the bridge deck having the sensation of being towed, so quiet is the flow of power. With twin Chrysler 6-cylinder motors she will do 16 miles an hour, or the speed may be stepped up to around 25 miles by installing 8-cylinder Chryslers.

As the plans show, there are two fine double staterooms, each with its own toilet room. The galley is forward, and the bridge deck is unusually spacious and comfortable. Fuel and water tanks are located under the bridge deck. Both staterooms are entered by means of companion steps from the bridge deck, and the engine room is accessible through a door in the after stateroom or by lifting a seat on the after deck. There is full headroom and ample ventilation in the engine room, and excellent locker and stowage space throughout the boat.



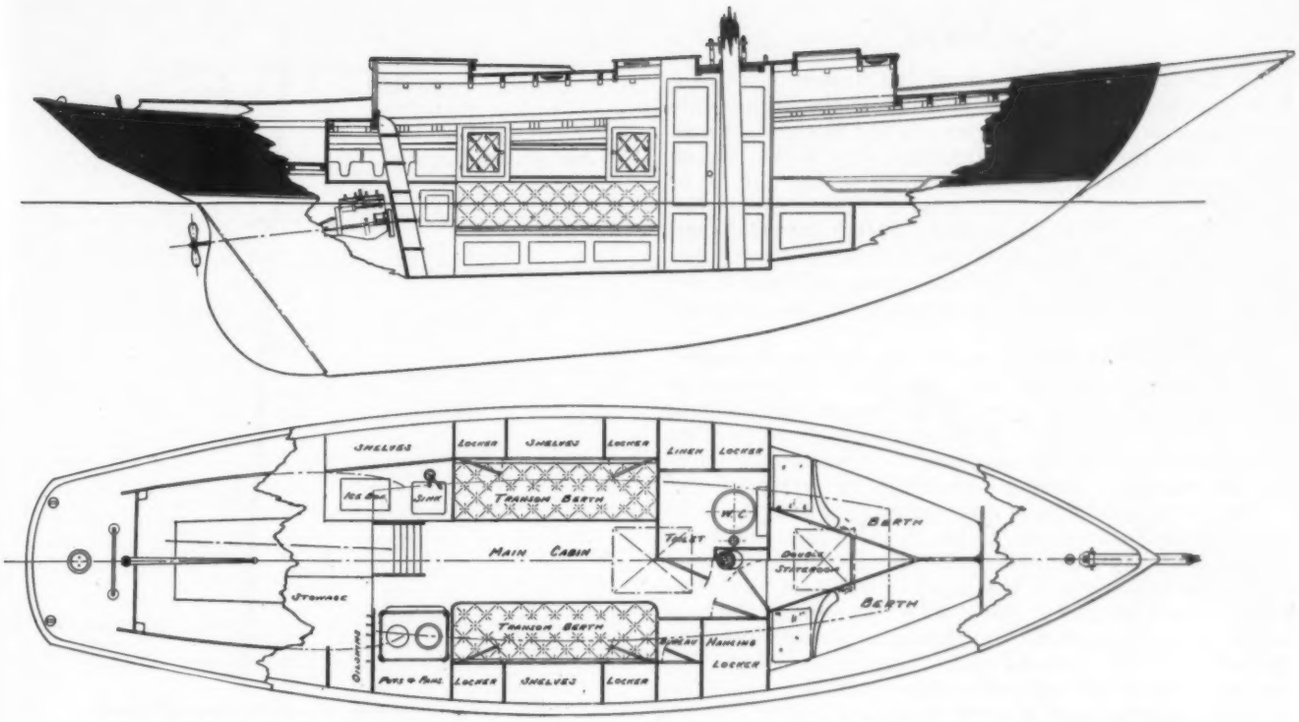
Sail plan of the Stephens-designed cutter

A Smart Cruising Cutter

THE plans on this and the following page show a smart little cruising cutter from the board of Sparkman & Stephens which is neat and seagoing in appearance, has good accommodations, and should step along at a lively clip in most any weather. She is just under 35 feet over all, 27 feet water line, 9 feet 6 inches beam and 5 feet 4 inches draft, with jib-headed cutter rig of 666 square feet area. The ends are short and freeboard good, while the sheer is easy and sweeping. The moderate forefoot and long lateral plane assure a craft which will steer well on all points of sailing.

Despite the short ends the rig has been kept well inboard, yet the mast is none too high for a cruising craft. A compact 4-cylinder motor fits in nicely under the bridge deck, and the feathering wheel is mounted abaft the rudder, obviating the necessity of a hole in the deadwood or rudder.

The accommodation plan shows a double stateroom forward, toilet room abreast the mast to port and hanging locker and bureau opposite, main cabin with two transom berths, and galley next the companion steps, with stove to starboard and sink, ice box, etc., opposite.



Inboard profile and cabin plan of the 35-foot cruising cutter designed by Sparkman & Stephens, described on preceding page

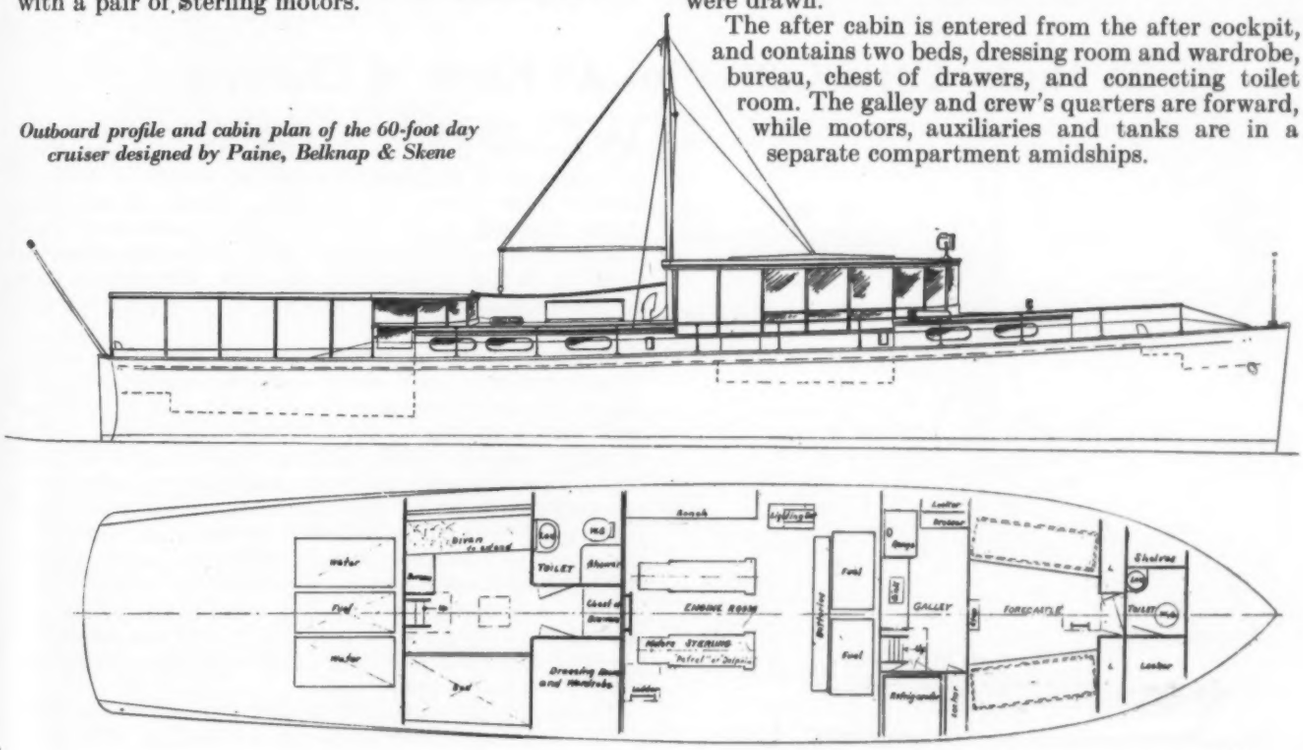
An Able, Comfortable Day Cruiser of Distinctive Appearance

THE plans of the handsome 60-foot day cruiser reproduced below are from the board of Paine, Belknap & Skene, of Boston, and show a trim, able craft of low, rakish appearance with several noteworthy features. She has a beam of 13 feet and draft of 3 feet 10 inches, and is expected to do a good 19 knots on all-day runs with a pair of Sterling motors.

While the hull has good freeboard and an easy sheer, the deckhouses have been kept as low as possible, and the glass fronts are nicely streamlined. In addition to the forward cockpit, there is a roomy deck shelter and a very spacious after cockpit, these being special requirements of the yachtsman for whom the plans were drawn.

The after cabin is entered from the after cockpit, and contains two beds, dressing room and wardrobe, bureau, chest of drawers, and connecting toilet room. The galley and crew's quarters are forward, while motors, auxiliaries and tanks are in a separate compartment amidships.

Outboard profile and cabin plan of the 60-foot day cruiser designed by Paine, Belknap & Skene

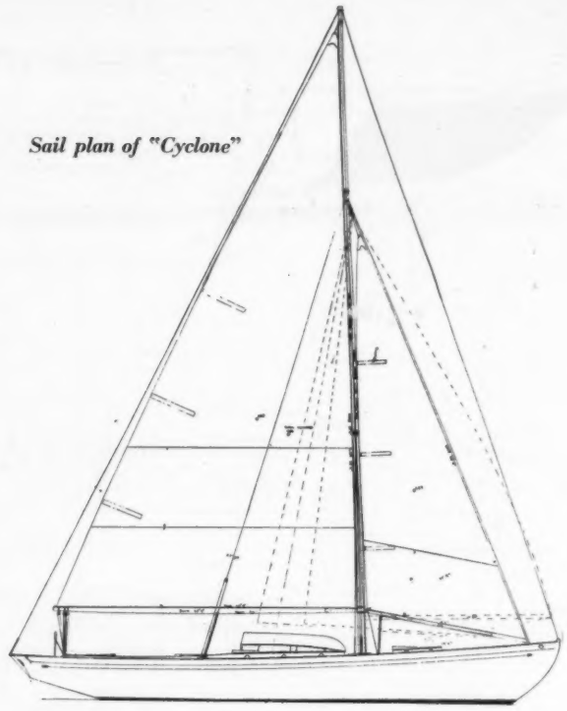


"Cyclone"

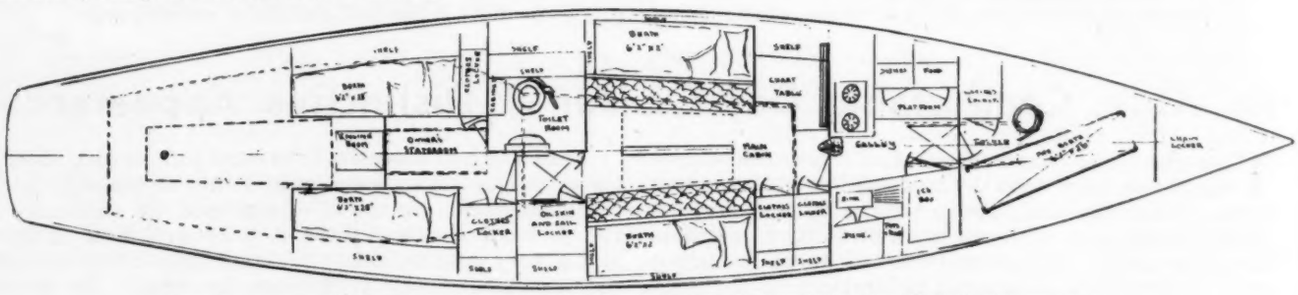
UP AT Reuben Heisler's yard, in Chester, Nova Scotia, they are rushing to completion the shippy cutter *Cyclone* in time to take part in the Bermuda Race. She is from the board of Frederick Jay Wells, whose *Viking* made a good showing in the 1930 affair, and is of the following dimensions: l.o.a. 47′2″; l.w.l. 35′; beam, 10′3″; draft, 7′3″; displacement, 32,000 lbs. Her lead keel weighs 13,500 lbs., her ratio of total ballast to displacement being 44.8%. The measured sail area is 909 sq. ft., and her Bermuda Race rating will be approximately 34.

Cyclone is of the narrow, easily-driven type of cruiser, with an easy form and fine run. Her rig should be decidedly easy for her crew to handle, yet sufficient to drive the fine-lined hull at good speed. A permanent backstay runs from the masthead to the counter without the necessity of using a boomkin, or outrigger.

The accommodations are quite good, with main cabin, double stateroom, toilet room, galley, and forecastle for a paid hand. Over 6 feet headroom is obtained under the decks, due to the depth of hull and high freeboard. Excellent locker and storage space has been provided, and a chart table and navigator's space has been worked into the forward end of the main cabin. The engine room aft will accommodate any of several of the modern, compact motors now available.



Sail plan of "Cyclone"



Interior accommodation plan of the cutter "Cyclone," designed by Frederick Jay Wells for his own use

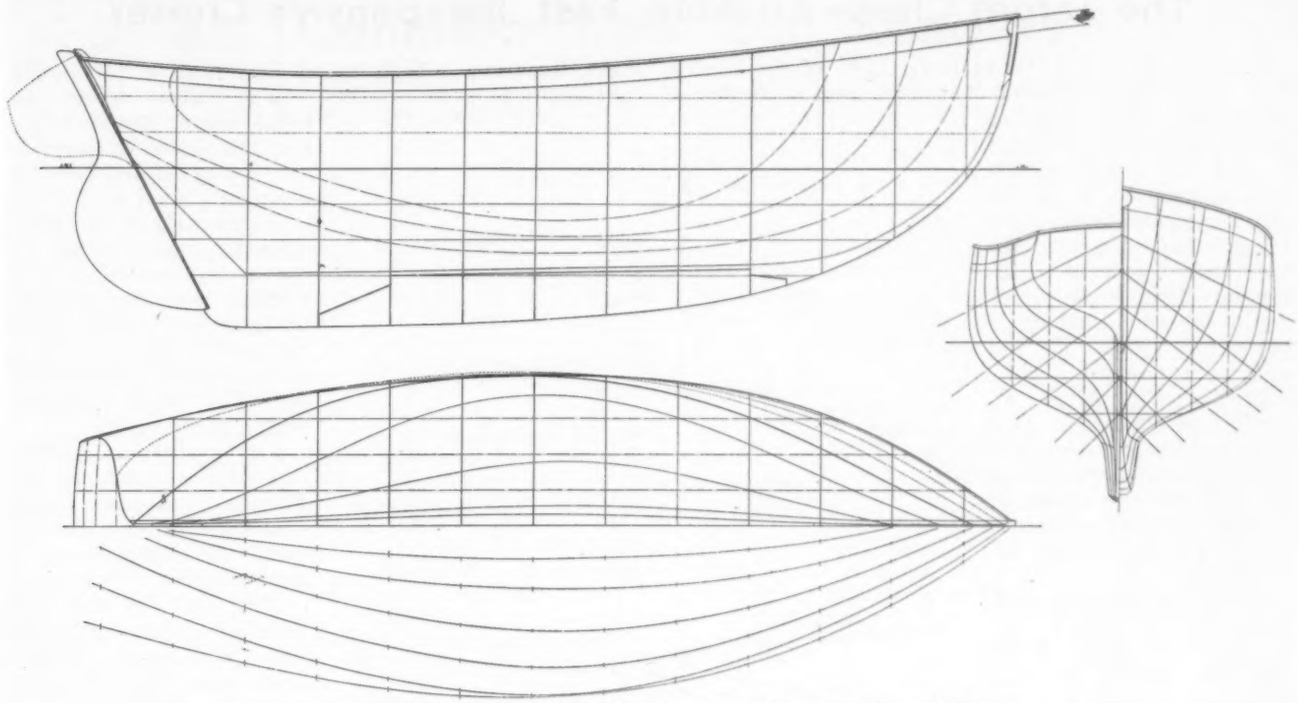
A Husky Little Cutter for All Kinds of Cruising

Sail plan of the Alden-designed cutter

WITH small craft of all descriptions holding the center of the stage these days, the accompanying plans of a small cruising cutter are sure to be of decided interest. She is from the board of John G. Alden, who states that she is an adaptation of a successful little English-built cutter designed a year ago by Mr. Maurice Griffiths, editor of *Yachting Monthly*. Her dimensions are: l.o.a. 26′5″; l.w.l. 23′3″; beam, 8′7″; draft, 4′6″; sail area, 479 sq. ft.

In profile, she is reminiscent of numerous small British cruisers, with short ends and high freeboard. An inspection of the plans show a boat with good beam and very firm bilges, the latter assuring great initial stability, a quality sadly lacking in many small cruising craft. The diagonals are easy and the buttocks also, especially considering the small size of the boat. The easy entrance is nicely balanced by fine water lines aft, and combined with the long lateral plane, assure a boat which should steer well in all conditions of wind and water. Altogether, the hull is an excellent combination of seagoing ability and sailing ability, and she should be able to take care of herself in excellent fashion no matter what the weather conditions.

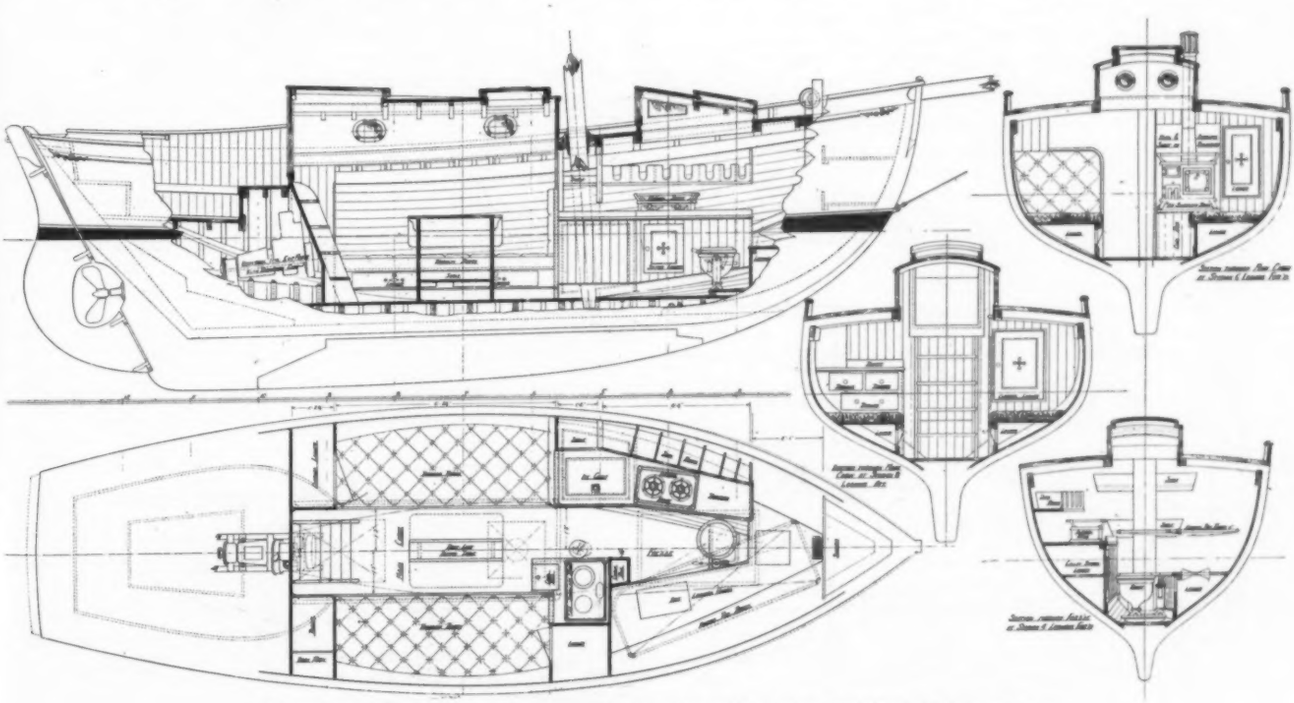
The jib-headed cutter rig is well adapted to the hull, both for driving power and ease of handling. The jib is



Lines and body plan of the husky 26-foot cutter designed by John G. Alden

fitted with a furling gear, and under forestaysail and reefed main she should be able to stand a lot of weather. A Genoa jib, set from the masthead, should pull her along in fine shape in light weather. While no backstays or runners are shown in the sail plan, they could easily be fitted, mainly for use when driving under a press of sail, or pitching into a short head sea.

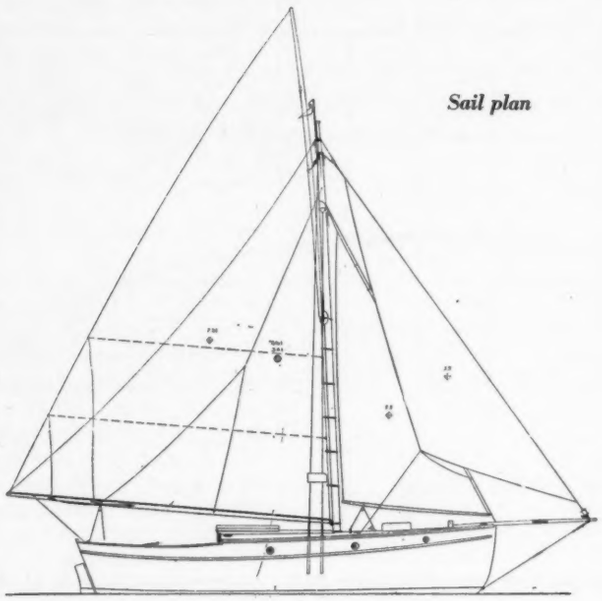
The accommodation plan shows a fine two-berth main cabin, folding pipe berth and toilet forward, and big galley fitted with both a coal stove and a liquid fuel stove, besides an ice box, shelves, etc. One of the modern small, compact motors fits in very nicely under the bridge deck. The cabin house has been kept very narrow, so that a tender may be carried on deck. There is 5′8″ headroom amidships, sitting headroom over the transoms, and full headroom under the companion slide forward. With plenty of locker and storage space throughout, she is as shippy and comfortable a little cruiser as one could ask for. The use of two stoves is somewhat of a novelty in so small a boat, but should prove a boon to those who want a coal fire for spring and fall use, and a quick, easy fire for summer meals.



Inboard profile, sections and accommodation plan of the Alden-designed 26-foot cutter

The Target Class—An Able, Fast, Inexpensive Cruiser

COMMODORE EDWARD G. JAY, of the Boston Yacht Club, believed that there were a number of yachtsmen with seagoing tastes who would welcome a class of small cruisers able enough to go to sea and race against each other in coastwise races. His idea was to develop the biggest little boat which could be furnished complete for $1000. To this end he appointed a committee, with Alex. W. Moffat as Chairman. Five designs were submitted to this committee, who finally selected the one shown on this page, which is from the board of S. S. Crocker, Jr., of Boston.

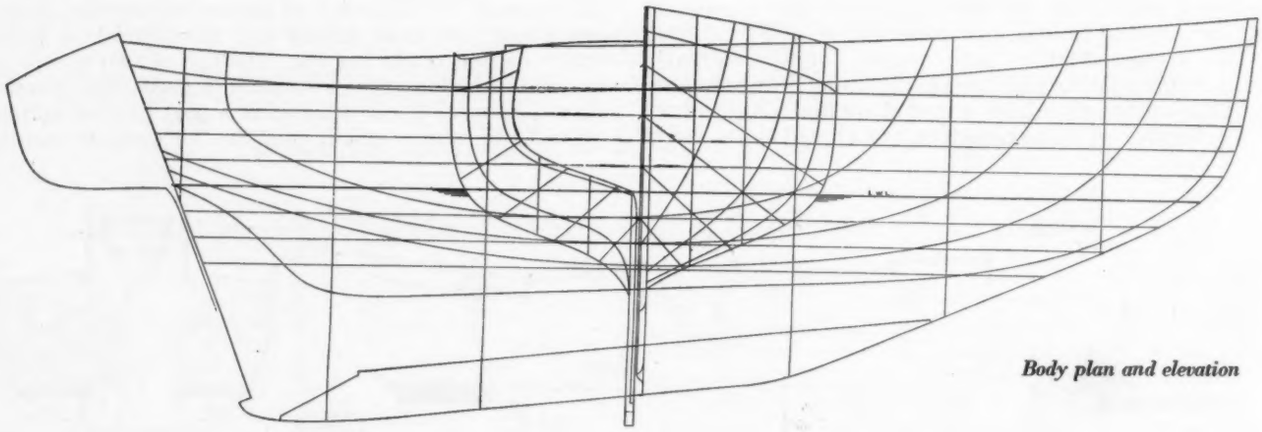


Sail plan

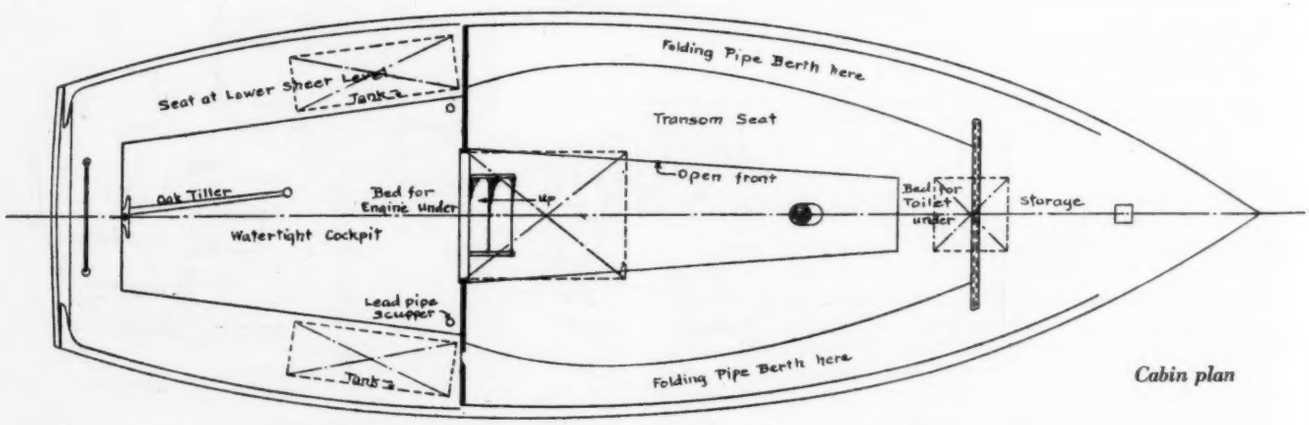
The dimensions are: l.o.a. 22′ 2″; l.w.l. 20′; beam, 7′ 6″; draft, 4′ 7″; sail area, 341 sq. ft.; outside ballast, 1500 lbs. The hull is short-ended, with high hull freeboard and good sheer, raised deck forward for roominess inside and strong, cheap construction, hard bilges for stability, and moderate deadrise. The buttock lines are long and easy, assuring a high speed limit and a form with minimum pitching tendency. The ballast, bilges and beam assure fine stability, but the beam forward is not too great to slow her down in a head sea.

A cutter rig, with gunter mainsail, was selected by the committee after considering both the gaff and jib-headers. Double headrig enables the boat to be hove-to under the forestaysail. The jib is equipped with a furling gear.

Any yachtsman wishing to build a boat to the Target Class may obtain plans and specifications from the designer for a moderate sum. Two enterprising builders are each building a boat on speculation, and eight builders have submitted estimates running from $805 to $1245. A circular now in preparation, giving the quotations of the different builders, may be obtained by writing to Alex. W. Moffat, c/o Walter Baker & Co., Dorchester, Mass.



Body plan and elevation



Cabin plan

Comment from Our Readers

Ocean Racers and Quitting

Editor, YACHTING:

AFTER reading some of the articles and letters on ocean racing in the last few issues of YACHTING, I cannot refrain from sending you a few comments of my own.

An idea seems to have become fixed in the minds of some of your readers that there is a substantial difference between a good cruising boat and a good ocean racing boat. I differ strongly from this point of view. I have a boat that I use primarily as a family cruising boat. However, I have sailed *Mistress* in one Bermuda Race, one Cape May Race, one Transatlantic Race, one Fastnet Race and a few other shorter events. After two years of careful study, if I were to decide to use her entirely for ocean racing, I would make no changes whatsoever. Likewise, if I were going to use her entirely for cruising, I would make no changes whatsoever. I shall go even further and say that, if I were going to design a new boat for either of those pastimes exclusively, I would simply use my present plans.

If this is not convincing, I can quote what Olin Stephens said at the last Cruising Club dinner when this very matter was under discussion. He stated that if he were to design a new boat similar to the *Dorade*, solely for cruising, he would make no changes in the design that he would not also make if he were to re-design her solely for ocean racing. As far as I am concerned, that finishes the subject for the present.

I cannot refrain, however, from making a few comments on the articles and correspondence concerning the "Gentle Art of Quitting," because in two of the letters published points of fundamental importance were brought up if future ocean races are to be conducted without serious accident. One writer discusses the subject from the point of view of a man who goes to sea in an old boat without the best possible spars, sails and gear. Many such a boat has been pulled through bad sea conditions by a competent crew, and perhaps that is all right if the course is confined to waters where numerous harbors are available, but I do not think anyone has any business inviting a number of his friends to go to sea in a boat unless he is satisfied that the boat, as far as hull, spars, rigging, equipment and sails are concerned, is entirely adequate for the business on hand.

The other excuse voiced to justify withdrawing is, to my mind, even more dangerous. Sometimes a good crew can save a poor boat, but an *inexperienced crew* is liable to lose *any* boat. There should be at least one experienced man in charge of any boat that goes on a deep sea race — someone who knows just how dark a dark night really does look, and what combination of sails the boat is really able to carry. Under proper conditions, as Alfred Loomis says, such sports as steeplechasing, bobsled racing, mountain climbing and certain types of big game hunting are more dangerous than ocean yacht racing, but sending a bunch of inexperienced enthusiasts to sea strikes me as courting disaster and something that may easily cause a catastrophe that will strike a serious blow at the sport of ocean racing.

As a matter of fact, both the arguments mentioned for quitting a race strike me as far more convincing arguments for never starting a race at all.

GEORGE E. ROOSEVELT.

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Dinghies Again

Editor, YACHTING:

ALL hail to "Dinghy Dan" and his Frostbite shipmates! They are having a good time and their boats are filling a long felt need. For years we've suffered under the illusion that there was no such thing as a good towing dinghy that could sail as well. In fact, few of us have ever seen a good, really satisfactory towing dinghy. Why this has been I don't know, for the Frostbite boats make it seem very simple.

At any rate, we have now the ideal yacht tender and we won't have to worry about its charging up over the counter some black night when we've had to put the good ship off before it. This quality alone will endear her to the heart of every man who has ever tried to keep one eye on the close-reefed main, looking for the first signs of a jibe, and the other over the stern in anticipation of the next rush of the tender. Yes, the Frostbite "dink" seems to have transformed the tender from a necessary but often deadly evil, to a true and trusted friend. In short, she is the answer to the yacht owner's prayer. She handles a load, rows well, will even perform to the tune of an outboard, and, last but not least, she will sail. This latter point has been very well brought out by the popular activities of the Frostbite Yacht Club. The heretofore unheard of idea of racing all winter in small boats has quite justly received tremendous support.

Everyone, I think, will agree with these statements, so I'll get down to my point lest I be accused of "spraying attar of roses over my honest opinions." This honest opinion is to the effect that the great and natural enthusiasm that has been created is threatening to lead "Dan" and his mates to make statements not altogether sound. The Frostbite boats are, first, last, and all the time, "utility tenders," and are sail boats only inasmuch as their sailing qualities can be worked into the design without in any way affecting their essential qualities as tenders. Obviously, their sailing qualities are not what they would be if this were the only point considered. It is a matter of great credit to their designers that they sail as well as they do. If you want a tender, here is one ideally adapted to that service; but to say that such a type "is the ideal type for juniors" is, I feel, a wrong conclusion. (I should like to extend the term "juniors" to include not only youngsters, but all people, young and old, who wish to learn properly to sail a boat.) If you have no need for a tender and want a boat in which to learn to sail, one suited to day sailing or class racing, then you will do much better to select a boat that is designed wholly to sail, one with a rig that is built with a view only to sailing and not to stowing while the boat is being towed. You will want a boat that will move in light airs as well as stand up in a breeze. One that has life and speed. A boat that behaves in every way like a real sail boat.

We all seem to agree that the 14-Foot International Dinghy (described in February YACHTING) is too much of a real boat to be called a dinghy, although we must remember that it was well known by that name long before the pale light of the New Year fell on a Frostbite gathering. She is designed as a sail boat, and is undoubtedly one of the finest of this size that has been developed. She makes no attempt to pass as a tender or a row boat, and it is no more foolish to expect this sail boat to tow well behind a yacht in a seaway (and I assure you she will not) than it is to expect the "utility tender" to give you all the life, speed, and "feel" that is the very essence of sport in small boat sailing.

"Dan" goes on to say of the "utility tender": "More real knowledge can be gained in this type of craft than can be had from sailing boats of larger dimensions. One gets an instant reaction to every movement, and therefore has to be ever alert." This is one of the strongest points in favor of *all* small boat sailing. In the little craft the sailor is in very intimate contact with his boat and the forces that make her go. Every action on his part has an immediate and readily perceived effect on the boat. The faster the boat, and the more highly developed the sailing qualities, the more this holds true. Then isn't it better that the beginner should first learn the reactions of a more normal sail boat, one in the design of which more thought has been given to how she will react to her tiller under sail than to a tow rope behind a yacht? The Frostbite sailors are very proud of the way their boats sail, and well they may be when all the facts are considered. But if "Dan" is led by his enthusiasm to think that it is perfection in small boat performance, and that their little ship is "the ideal type" in which to teach beginners the fine points of the game, that becomes an entirely different matter.

After excluding the 14-Foot International Dinghy from the group of boats rightly called by that name, he goes on: "No type of boat, be it large or small, can have as much appeal as the modern sailing dinghy. I say this after long and careful consideration, without apology. Those who are 'dinghy conscious' I think will agree. To those less fortunate I say this: A well designed sailing dinghy in the hands of young or old will give the

(Continued on page 106)

Of Interest To the Skipper

Copyright by Bureau "Hollandia," Haarlem

Thirty-two knots in this 45-foot Dutch naval cruiser, designed by H. W. de Voogt and built with galvanized iron frames

Catalogs Received

TWO interesting booklets which describe all of the pleasures of outboarding with Elto and Evinrude motors are now being distributed by the Outboard Motors Corp., Milwaukee, Wis. These booklets are instructive and helpful. They give complete descriptions of all of the motors ranging from 4 h.p. to 36 h.p. models, suggestions as to the proper motor for various kinds of outboard boats, contain complete motor specifications, and describe a list of accessories and water sports equipment.

The Scripps Motor Co., of Detroit, are distributing their new 1932 catalog. In addition to the description of the improvements on former models comprising the Scripps line of engines, the catalog contains pictures and complete technical information on the new "150" series of engines. Readers interested in receiving copies are requested to write the Scripps Motor Co., 5833 Lincoln Ave., Detroit.

"Osprey," a Richardson Cruisabout powered with a Sterling Petrel, is used for fishing in Florida waters

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Right. "Doris," built by Forest Johnson, of Coconut Grove, for John Wanamaker, is powered with a 200 h.p. Scripps, giving a speed of 26 m.p.h.

The Worthington Pump and Machinery Corporation, of Harrison, N. J., have recently released a number of new catalogs and bulletins of interest to the boat owner. These publications cover stationary Diesel engines of various types, marine Diesel engines, gas engines, air compressors and different types of pumps. Readers interested in any of these items may secure catalogs by writing and specifying the type of machinery they want information about.

Walker logs are well known to yachtsmen and a new catalog of these products will be of use to readers considering navigational equipment of unquestionable reliability. Copies of "Ship Logs" will be sent to readers who will write to Thomas Walker and Son, 58 Oxford St., Birmingham, England.

Four attractive bulletins covering the products of the Hill Diesel Engine Co., of Lansing, Mich., are now available to interested yachtsmen. Bulletin 21 illustrates and describes the Hill 5″ by 7″ and 6″ by 10″ marine engines ranging from 10 to 120 h.p. Bulletin 25 describes direct connected Diesel electric generators from 10 to 30 k.w. output. Bulletin 26 covers the light-weight high-speed marine engines from 23 to 60 h.p. Bulletin 27 is a complete reference to various combinations of stationary Diesel engines coupled with generators, compressors and pumps. These bulletins will be gladly furnished upon request.

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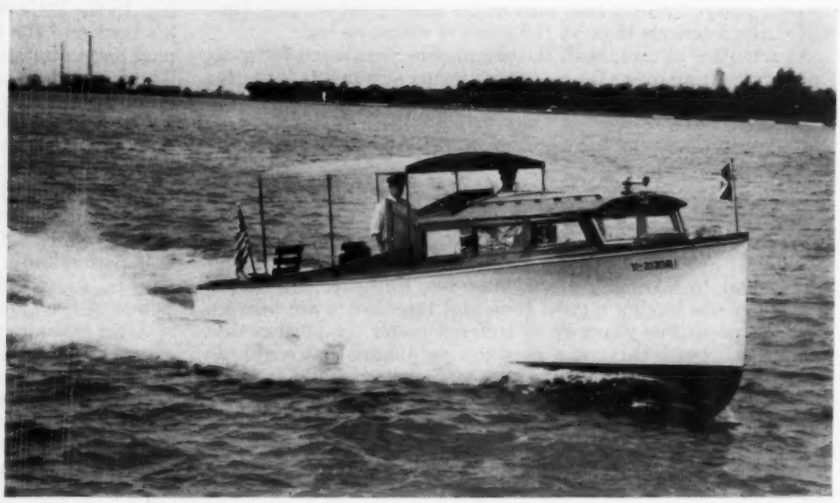
Short Wave Marine Radio on Bermuda Racer

The new yacht *Brilliant*, recently constructed at Nevins', from designs by Sparkman & Stephens for Walter Barnum, of New York, has been equipped with short wave marine radio receiving apparatus supplied by Salon Engineering Service.

Weather reports, time signals, short wave foreign broadcasting, code communications and local broadcasting are obtainable as the receiver covers a wave range from 16 to 550 meters. The equipment is mounted and all accessories contained within a secretary cabinet in the main cabin. The yacht's 32-volt system is used to furnish current for the receiver. The loud speaker has an appropriate anchor design and is mounted on a hinged door to afford accessibility to the lower secretary compartments. The aerial consists of a three-wire system fastened within the hollow mainmast and a plug-in arrangement has been provided to allow for the removal of the mast at any time.

Inquiries concerning marine radio may be addressed to the Salon Engineering Service, 119 West 57th Street, New York City.



"Ali Baba" at Palm Beach. She is a 40-foot Robinson Seagull and will step along at 40 m.p.h.

New Heavy Duty Bolinders Diesels

Bolinders Company, manufacturers of the well-known low pressure oil engine used in yachts, sailing boats and other vessels throughout the world have just announced a new full Diesel engine. Although of the heavy-duty type, the engine possesses many new features that will interest yachtsmen. The extreme shortness and compact construction, combined with the straight-line enclosed design, meet the demand for a clean-cut machine for larger boats.

The engine, built in sizes up to 1000 b.h.p., is of the 2-cycle type employing airless injection. A scavenge pump located forward supplies the air to each cylinder through a manifold running the length of the engine. The fully enclosed flywheel is located aft, outside of it being the Kingsbury type thrust bearing. A two-stage air compressor is placed at the extreme forward end, driven directly from the crank shaft, and supplies the starting air to the bottles. All circulating and bilge pumps are located centrally and accessibly.

Continuous force feed lubrication is used. The lubricating oil is led from the pump through a filter to the main bearings, crank pins, up through the rods to the wrist pins and returns to the crankcase sump. Cylinder walls are lubricated by separate lines.

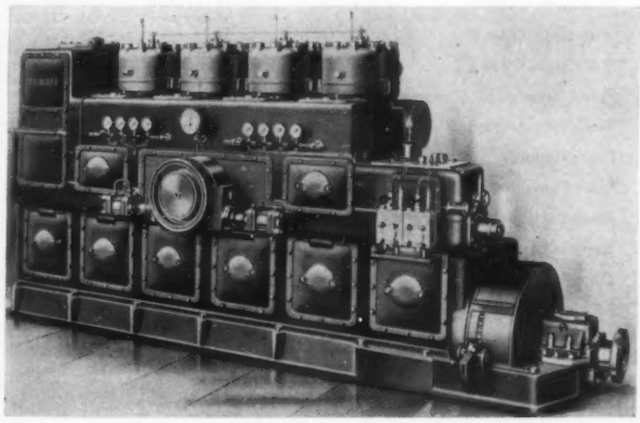
Removable cylinder liners are used, the jackets being sealed in a unique manner, preventing leakage.

Pistons are oil cooled. The cooling oil, used entirely separately from the lubrication system, is carried to and from the pistons in telescopic pipes, circulating through a cooler located in the bilge.

The cylinder heads offer an unusually symmetrical design. The same metal thickness is found all around the head. This increases the thermal-mechanical strength tremendously. All fittings, air start valve, pipe inlets, etc., are placed on a separate housing which is bolted to the cylinder head. The combustion chamber is of the open type, promoting the highest efficiency. Here it can be stated that no heating devices, punks, or artificial means are used under any conditions to give this engine its initial start.

A single control is provided completely to manoeuver the engine. The machine is started, stopped and reversed, and its speed is controlled by one handwheel located on the side.

All necessary indicating instruments to aid the operator are supplied with the machine. Gauges showing pressure in the cooling oil and lubricating oil lines, in the scavenge air manifold and in the starting air tanks, are supplied. The pressure in the various fuel lines is also given by gauges for that purpose.



A new airless injection Bolinders Diesel engine of the two-cycle type

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Sparkman and Stephens Open Providence Office

Sparkman and Stephens Inc., naval architects and yacht brokers, of New York, announce that they have opened a branch office in Providence, R. I., at 1124 Hospital Trust Building. This new office is in charge of F. Emmons Alexander, who for the past several years has been connected with John Alden, Boston, Mass., in the yacht brokerage department.

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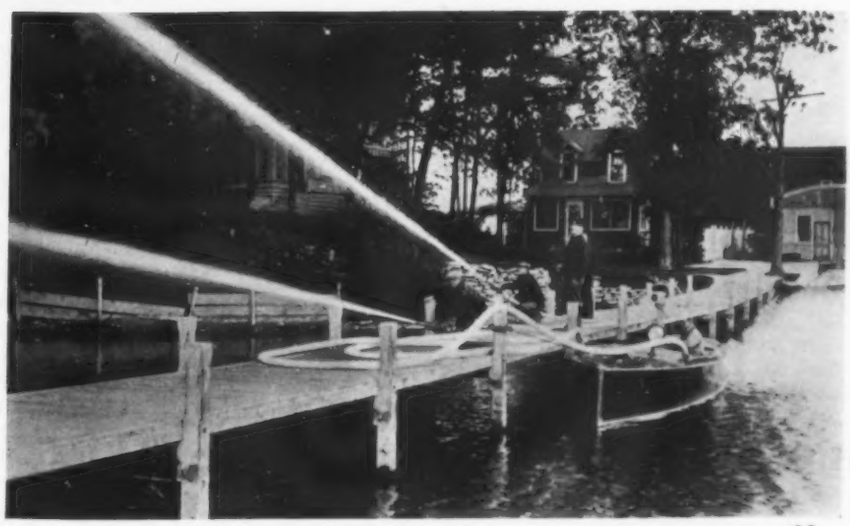
Tide Tables

The Pettit Paint Company, of Jersey City, has for distribution a number of Atlantic Coast Tide Tables, issued by the government. This authoritative set of tables gives the times and the heights of tides at all important harbors and points along the Atlantic coast. These tables will be sent gratis to all readers of YACHTING upon their request to the Pettit Paint Co.

(*Continued on page 123*)

Below. A 24-foot Chris-Craft makes a practical fire boat with large centrifugal pump driven by a Chrysler engine



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J. E. GERICH, OWNER
S. S. CROCKER, ARCHITECT
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MR. GERICH WRITES:

"I am using your Model 3T Electric Windlass on my schooner yacht "Jacinta" which has proven exceptionally satisfactory, and a great labor saving in handling anchors."

Thank You Sir and the hundreds of other owners, architects and builders who have expressed their appreciation of these machines.

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AMERICAN ENGINEERING CO.
2432 Aramingo Avenue
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The Miami Regatta

(*Continued from page 45*)

twelve entries, and was sailed in a moderate easterly breeze and a tumble of sea.

Commodore D. H. Conklin's fast Herreshoff sloop *Marchioness* was again the winner, setting a record for the 12-mile course of 2 hours, 19 minutes, 45 seconds. The schooner *Lanakai*, Dr. Alexander C. Howe, was second, and W. B. Allen's little *Gamecock* took third honors. Under the terms of the deed of gift the cup goes permanently to the yacht winning the most races in eight sailings. As *Marchioness* has now won three, she has the edge on other competitors and a win next year will pretty nearly give it to her for good.

On Sunday, March 20th, the Florida East Coast Yachting Association sailed its first annual regatta. This event brought out a big fleet of some 70 to 80 boats of all types. Sixteen classes were raced, including one for women skippers and one for boys under 18 years of age.

Interest in the regatta was heightened by the appearance, for the first time in an open regatta in this country, of one of the Curry 20-square-metre racers, the *Barracuda*, owned by C. T. Ludington and a duplicate of the boat exhibited at the New York Motor Boat Show. This boat won with ease in all the events in which she started, and made the fastest time at the regatta. Over a 3-mile triangular course, one leg to windward, sailed in light airs, her best time was 26 minutes, 40 seconds.

The results, showing winner and runner-up, follow:

POWER BOAT RACES

Class	Boat	Pilot	Best Time	Points
Outboards, Class A	*Celo I*	T. Estlick	30.998	761
	Celo II	G. W. Martin	31.068	400
Outboards, Class B	*Celo III*	G. W. Martin	36.889	800
	———	G. Roberts	35.977	650
Outboards, Class C	*Miss Celo*	G. Roberts	40.297	800
	Shooting Star	C. M. Scull	39.518	685
Outboards, Class F	*Hav-A-Tampa*	C. Meloon	44.205	800
	———	Cal Leech	41.714	650
Stock Runabouts, 50 h.p.	*Prigg II*	Paul Prigg	28.612	400
	Maja	Mrs. Rutherford	27.586	361
Stock Runabouts, 130 h.p.	———	Gurnee Munn	30.352	400
	———	A. Cermak	30.220	361
Stock Runabouts, 225 h.p.	*Scram*	J. Wanamaker, Jr.	36.32	761
	Chris-Craft	E. R. Jones	37.291	724
Stock Runabouts, 250 h.p.	*Chris-Craft*	J. Rutherford	38.19	800
	Chris-Craft	E. R. Jones	37.37	722
Prigg Runabouts	*Snooty*	F. W. Krausi	26.299	761
	———	Capt. Rasso	26.223	761
Express Cruisers	*Mary Helen*	R. Frost	24.296	
	Obie	J. Wanamaker, Jr.	21.344	
Disp.-Free-for-All	*Garwood*	T. Barrett	42.79	800
	Why Not	J. Rutherford	41.449	722

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The Advantages of Transverse Battens

(*Continued from page 53*)

but with a reef rolled on the boom she seemed to go just as fast, and her comparative superiority was just as marked. She proved easy to handle, once one got used to the type, but undoubtedly we were not getting the most out of her that was possible, due to our unfamiliarity with the rig. Also, the competition was not of the type to let one really get a line on the boat's potential capabilities. In the five races she sailed she met, among other boats, one Star, No. 280; the best of the Suicide Class in those waters, and the Herreshoff centerboard sloop *Water Lily*, of about the same, or perhaps a trifle more sail area. These boats she beat by from one-half to three-quarters of a mile over a short 3-mile triangular course.

What the new boat will do against American boats of the same general type, such as the Barnegat Bay Class E scows, or some of the Inland Lake scows, has yet to be seen. In light weather she should do well against these. In a breeze, the outcome would be more doubtful. Perhaps before the summer is over we shall know more about the boat and her capabilities, but of the efficiency of the Curry rig enough has been seen to justify one's belief in its possibilities if intelligently handled.

H. L. S.

THINK OF IT! A FAST, POWERFUL *LEVEL RIDING* *Chris-Craft* for $795

Reasons why the 15½-foot Chris-Craft runabout has achieved instant, universal popularity are not hard to find. Simply weigh its remarkably low price . . . $795 . . . against these facts:

That it is delivered complete, equipped and ready to run . . . with no extra essentials to buy.

That it is a full-sized runabout . . . with exceptional beam and freeboard . . . seating six in comfort in forward and rear cockpits.

That it is driven by a 55 h. p. marine motor of the latest type, with flashing acceleration and speeds up to 32 m. p. h.

That it is of genuine Chris-Craft quality throughout . . . with double-planked bottom and batten seam construction . . . amazingly seaworthy in any water.

That it shares with all Chris-Craft runabouts the exclusive new LEVEL RIDING principle, which gives it smooth riding qualities and all-around performance never expected in a boat of its size.

The 15½-footer is one of a fleet of finer, smarter Chris-Craft ranging in length up to 27 feet, in speed to 45 m. p. h., and in price from $4975 down.

Ask your nearest dealer to show them, and explain how you can buy any Chris-Craft out of income.

Copr. 1932, Chris-Craft Corp. (146)

Some desirable Chris-Craft sales territories are available

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Chris-Craft

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COMMUTERS · CRUISERS · YACHTS · TENDERS

PRICED FROM $795 TO $13,950 (F. O. B. ALGONAC)

These Authorized Dealers Display 1932 *LEVEL RIDING* Chris-Craft

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Meyer Boat Livery
Arverne, N. Y.
Cohrone Boat Co., Inc.
Foot of Elizabeth Street
Bagnell, Mo.
Franklin & Miles Boat Service
Osage Beach, Lake of the Ozarks
Baltimore, Md.
Raymond W. Thompson
1400 N. Charles St.
Bar Harbor, Me.
F. B. Hayes
Bay Shore, L. I.
Roy M. Brewster
Bayville, N. Y.
Seawanhaka Garage
Beaver Falls, Pa.
G. H. Hamilton Mfg. Co.
Bemus Point, N. Y.
L. S. Aero Marine, Inc.
Birmingham, Ala.
Masters Motor Co.
Boothbay Harbor, Me.
R. A. Scott
Boston, Mass.
Walter H. Moreton Corp.
1045 Commonwealth Ave.
Brielle, N. J.
Feuerbach & Hansen, Inc.
Buckeye Lake, Ohio
Sayre Brothers
Buffalo, N. Y.
Swan Marine Sales Co.
38 Swan Street
Burlington, Vt.
Champlain Marine & Realty
Carthage, N. Y.
D. F. Gettings
Charleston, S. C.
Gas Engine Electric Co.
Chicago, Ill.
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George Mercier
Cleveland, Ohio
Cleveland Yacht & Supply Co.
2909 Detroit Ave.
Columbia, S. C.
Oliver Motor Co.
2007 Main St.
Dallas, Texas
Day & Slater Boat Co.
Danbury, Conn.
Alfred H. Higson
125 White St.
Delavan, Wis.
Delavan Lake Boat Co.
Detroit, Mich.
Chris-Craft Corp.
2941 E. Jefferson Ave.
Motor Boat Sales & Service
Foot of Alter Road
East Setauket, L. I.
Lyon Bros. Cont. Co.
Essington, Pa.
Yacht Repair & Storage Co.
Fair Haven, Mass.
Casey Boat Building Co.
Fontana, Wis.
Palmer Boat Company
Lake Geneva
Fort Worth, Tex.
Marion E. Herring Boat Works
Nine Mile Bridge, Lake Worth
Freeport, L. I.
Chatfield Marine Sales & Service, Inc.
Hudson Point
Gloversville, N. Y.
I. Heiman
188 S. Main St.
Green Lake, Wis.
Brooks Garage & Boat Co.
Hampton, Va.
The Sportsman's Shop
123 E. Queen St.
Hartford, Conn.
Weston M. Jenks
8 Ford Street
Hessel, Mich.
E. J. Mertaugh Boat Works
Hot Springs, Ark.
F. C. Stearns Hdwe. Co.
811 Central Ave.
Houston, Texas
Lechenger Marine Store
Main St.
Kansas City, Kansas
Simmons Sporting Goods Co.
507 Minnesota Ave.
Kennett Square, Pa.
A. T. Conord
Lake George, N. Y.
E. N. Lamb & Sons
Bolton Landing
Lake Hopatcong, N. J.
Hockenjos Boat Co.
Groat Cove
Lake Mahopac, N. Y.
C. J. Benjamin
Lake Mohawk, N. J.
Stickle Bros., Inc.
Lake Placid, N. Y.
George & Bliss
Lakeside, Ohio
Worthy R. Brown & Son, Inc.
Lancaster, Pa.
Darmstaetter's
35 N. Queen St.
Leland, Mich.
Stander Motor Company
Lockport, N. Y. (Olcott)
Arthur Lerch
Long Beach, L. I.
Chris-Craft Marine Service
N. End Long Beach Bridge
Louisville, Ky.
Falls City Boat Works
132 N. Fourth St.
Macon, Ga.
Georgia Motor Boat Co.
561 Mulberry St
Madison, Wis.
Tracy Boat Company
412 N. Franklin St.
Mamaroneck, L. I.
Orienta Boat Works
McHenry, Ill.
Hunter Boat Co.
Newark, N. J.
Carl W. Bush Co.
518 Broad St.
New Rochelle, N. Y.
Charles F. Weller
400 Main St.
New York, N. Y.
Chris-Craft Corporation
1 West 52nd St.
Armstrong & Galbraith
79 Barclay
RabSons
1373 Sixth Ave.
Niagara Falls, N. Y.
Pierce Smale Motor Corp.
213 Tenth St.
Northport, N. Y.
Mitchel & Conklin
North Troy, N. Y.
Harry H. Henry
655 Second Ave.
Ogdensburg, N. Y.
Ward's Sporting Goods Store
Okoboji, Iowa
Wilson Boat Works
Oshkosh, Wis.
Clark & Lund
Paterson, N. J.
Coleman Halloran, Inc.
Market at 35th St.
Paupack, Pa.
A. Josco
Peoria, Ill.
George W. Brickner, Jr.
Petoskey, Mich.
Petoskey Boat Works
Philadelphia, Pa.
Essington Yacht Yards
1415 North Broad St.
Pittsburgh, Pa.
Chris-Craft Pittsburgh Co.
2743 Liberty Ave.
Portland, Me.
Albert G. Frost
24 Forest Ave.
Portsmouth, Ohio
Glockner Hdwe. Co.
2nd & Chillicothe
Port Washington, L. I.
Manhasset Bay Boat Corp.
Richmond, Va.
Tignor's Sport Shop
508 East Franklin St.
Rochester, N. Y.
Howe & Rogers Co.
89 Clinton Ave., S.
Rochester Marine Co., Inc.
115 North Street
St. Louis, Mo.
Schneider Nash Sales & Service
4919 S. Kingshighway Blvd.
Savannah, Ga.
Stubbs Hdwe. Co.
121 W. Congress St.
Seabright, N. J.
H. L. Zobel
Spring Lake, Mich.
E. J. Bauman Marine Corp.
Stamford, Conn.
Connecticut Yacht Service
Stone Harbor, N. J.
J. Salveson & Son
Sunapee, N. H.
Smith Machine Co.
Syracuse, Ind.
Wawasee Slip
Syracuse, N. Y.
Syracuse Motor Marine Corp.
344 W. Genesee St.
Utica, N. Y.
Utica Auto Electric Service
404 Seneca Street
Washington, D. C.
Flood Gate Motor Boat Sales
14th & Water St.
Wayzata, Minn.
Minnetonka Boat Works, Inc.
Lake Minnetonka
The Weirs, N. H.
Irwin Corporation
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Wenatchee, Wash.
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Wilmington, Cal.
Harry C. Wilson & Co., Ltd.
Foot of Avalon Blvd.
Wilmington, N. C.
Wilmington Iron Works
Wolfeboro, N. H.
Goodhue & Hawkins
Lake Winnipesaukee
York, Pa.
Byron H. Resh
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Zanesville, Ohio
Triangle Motor Sales
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KAESS Radio Compass and Direction Finder takes the guess out of navigation. With this instrument a knowledge of navigation is not a necessity. If you can read a chart, you can go anywhere. It requires approximately a half hour to learn its operation. It has oral and visual indicators. This is the same instrument as is now being used on ocean-going vessels of all kinds, but reduced to a size and price practical for use on pleasure craft.

With the Kaess Radio Compass and Direction Finder you can take accurate bearings on lighthouse and lightship beacons, airway beacons and commercial stations. It may also be used for regular broadcast reception and bearings may be taken accurately on broadcast stations.

. . . a Radio Compass and a Broadcast Receiver Combined

Write today for further information.

Manufactured by

AIRPLANE & MARINE DIRECTION FINDER CORP.

GATES AVE. - LINDENHURST, L. I. - NEW YORK

The New Haven Sharpie

(Continued from page 82)

It does not seem practical to design a cabin sharpie under 28 feet overall on New Haven proportions, as the narrow beam and the space required by the centerboard do not permit much in the way of accommodations. Hence, when a small sharpie is wanted, something similar to Fig. 4 is the result. The deadrise aft is necessary to clear the run. In this example an attempt is made to retain the sailing qualities of the New Haven type, combined with the greater accommodation of the Hampton Flattie. The lifting cabin top is similar to that shown in Cook's *Single-Handed Sailing*. No shrouds are used on the mast, unless desired. Construction is the same as in the New Haven sharpie, except for the slight deadrise aft. Deadrise is not introduced to prevent pounding but to reduce wetted surface, which, with excess stability, are the chief causes of failure in the wide sharpies.

Fig. 5 shows a Nonpareil sharpie with a leg-of-mutton schooner rig, 45 feet long. She is about the minimum length in which full headroom can be expected. A small amount of deadrise fore and aft has been employed, after Clapham's method, to permit an increase in displacement which otherwise could not be used with the flat bottom. This design is particularly suitable for Florida waters. Small ventilators are shown over the ports in the trunk. This boat is seaworthy enough to make any necessary outside jumps in good weather.

It is not claimed that this type is suitable for extended cruising in blue water. However, comparatively few of us are in a position to take long voyages, so possibly the sharpie will meet the needs of many boat sailors. For those living on tidal waters where harbors dry out at low tide, the sharpie is an excellent type. It will serve with safety and satisfaction in all localities where the water is shoal.

Pounding, when upright at anchor, is a fault of all sharpies. It was the custom to run small cruising sharpies on a mud or sand bank, or to beach them for the night, to avoid this annoyance. Large sharpies it is usually possible to get into a smooth anchorage, as they draw so little water. Some pounding must be expected underway, of course.

In the drawings no attempt has been made to "pretty up" the type; it is possible to use curved stems, for example, but the only result is a useless increase in cost. If curved stems are employed, some curvature in the sides, at least forward, is required, which serves no useful purpose.

The two-masted sharpie, of the New Haven type, is sailed like a centerboard sloop with a large jib, the foresail taking the place of the jib. In strong breezes it is best to ease a sharpie by slacking the fore sheet, rather than by the sudden easing of the helm, as the stern slews around so fast on the helm that water may come aboard or the boat may trip and capsize. In careful hands there is no danger, however. Heavy rigs, well stayed, make the small sharpie unsafe. The working sharpies will be dismasted before they can capsize, which is one of the reasons why no shrouds are used. Their light, limber spars permit the wind to spill out when the boat is heavily pressed. The whip of these spars seems to help their sailing, as is the case with so many light hulls. Certainly, they can carry their sail longer when the masts are unstayed.

The chief recommendations of the sharpie are its cheapness, speed and ease of handling. It is possible that some readers may find in this type a boat suitable for their needs. At least, the sharpie is a most interesting craft, and the present generation of yachtsmen should be acquainted with its qualities.

BIGGEST NEWS IN BOATING

PUBLISHED BY THE ELTO DIVISION *of the* OUTBOARD MOTORS CORPORATION, *Milwaukee*

Boating News and Comment

In our last issue at the top of this column, we pictured Charles Harrison, keen British racing driver, and wished him lots of luck in his effort to "lift" the Green trophy. Harrison had everything but luck. Second in two heats, a sure winner with almost any place in the third, he beat the gun with a bunch of the boys and was disqualified. The winner, young Bill Crawford, Jr., is shown in the upper right hand corner.

-Elto-

Now, at top o'column, we feature three intrepid voyagers, Thomas Hand, Robert Johnson and Roger Millen. Not racers, they, but adventurers extraordinary. Starting from New York they are now on a 7,000 mile trip around the coastline of the United States. If fine equipment can turn the trick they'll come through. On the stern of the excellent 18 foot runabout is a rugged 25 H. P. Elto Super "C".

-Elto-

The next big event will be the Albany—New York Marathon, one of the most interesting of sport spectacles. You'll remember that last year the flaming haired Red Woodworth, football hero, won a spectacular victory, covering the course in three hours, ten minutes, at the average speed of 41.8 m.p.h. Experts seem confident that, given a fair break in the weather, this record will be eclipsed. Time now to tune up a racing Super "C" or "4-60". The 1932 models are faster than ever.

-Elto-

Any man who loves engines and boats and sporting equipment, and lives within any reasonable distance from Chicago, should not fail to take in the Chicago Motor Boat show, April 22nd to May 1st. Each year this show grows bigger, better, more interesting.

-Elto-

Two new products now make their debut from our plant. These products will interest the boating fraternity chiefly because of the almost exquisite perfection of the small gasoline motors with which they are equipped. One product is a "home-size" power lawn mower selling under $100. The other is a bike motor selling under $50.

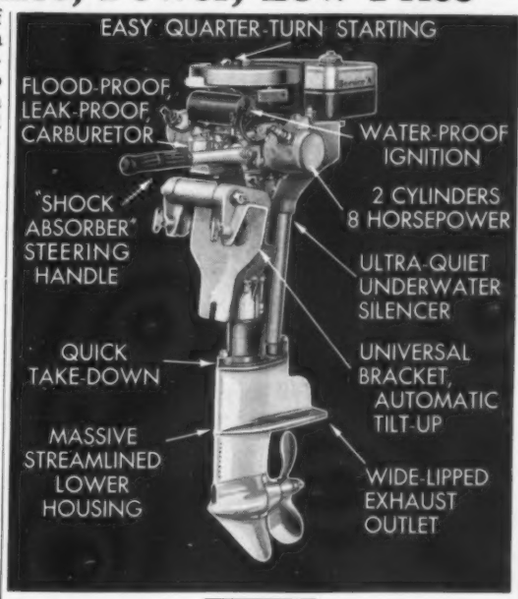
Elto Service "A" 8 H. P. $128.50

New Motor Acclaimed Epochal in Performance, Power, Low Price

Many thousands of outboard users want a motor of more than average power and pep and "push". Some own boats a bit too big and bulky to give satisfactory speed with any of the smaller motors. Every fisherman wants to get to his favorite haunts in the least possible time. And even the fellow who says "a small motor gives power enough for me," enjoys the added surge of speed, the extra responsiveness and capability that only greater horsepower can deliver.

For these folks we designed the Service "A". It has the handsome streamlined construction, the tremendous strength, and many of the features of the largest Elto Motors. But its inevitable popularity made possible a price sensationally low.

Service "A" is a splendid motor for family boats, fishing and utility craft. It will drive an ordinary boat of fair lines at 12 to 15 miles an hour. It will speed a racing hull up to 25 miles—but it is built distinctly for service—Service with a Capital S—and not for racing!



Offers Quarter Turn Starting Ease

Old time Elto enthusiasts have given the Service "A" an exceptionally hearty welcome. They recognized it as a thoroughly modernized version of the famous steady plugging, everlastingly reliable *Service Twin*, tens-of-thousands of which were sold in the years 1921 to 1929. The modern high speed motors eventually displaced it, but none ever quite won the same affection accorded the Service Twin.

The same starting ease that distinguished this earlier model is a feature of the Service "A". The motor is never pulled over compression. The flywheel is merely flipped *against* compression — the timer clicks off the fat, white-hot battery spark—and you're off!

Service "A" offers all the desirable characteristics of the Service Twin—plus far greater power, speed, and maneuverability. Though it is twice as powerful, it sells at a much lower price.

New $87.75 Fisherman Model Sets Enquiry Record

Ole Evinrude has done more than inventing and engineering since he first started to develop the outboard nearly 30 years ago. He has studied people and what they want. Last year he said "We'll build the finest possible motor that can be produced in big quantity at a really low price—and don't worry about the volume"!

To date there have been more inquiries—several thousand more—on the Fisherman than on any other single model over a like period in many years. Those already in service are selling others—and the Fisherman looks like a big leader for 1932.

Obviously no one motor satisfies all requirements. Many want more power (see Service "A" above). Other Elto models are the Lightweight, 4 H. P.; Super "A", 11 H. P.; Special Speedster, 12 H. P.; Senior Speedster, 14 H. P.; Super "C", 25 H. P.; Junior Quad, 18 H. P.; Senior Quad, 36 H. P.

24-Page Catalog on Accessories

Outboard Motoring is about the least expensive of sports — particularly nowadays. A utility boat plus an Elto Fisherman or Lightweight requires a total expenditure of well under $150.00

But there are many things costing little that add greatly to boating pleasures. Safety Kapok cushions for example, and remote steering controls, easy-pouring fuel cans and electric running lights, handy tool kits and slow-speed trolling guides. So great is the assortment that it takes every line of a 24-page book to illustrate and describe them.

The book is new — the prices are "in the spirit of the times"—and a copy may be had on request. Simply write for the accessory catalog, stating make and type of motor.

Lightweight Popular For Dinghy Use

The handy dependable little Lightweight continues to outstrip other models in the favor of yachtsmen.

Its 4 horsepower is just right for average yacht tenders. The motor weighs only 38 pounds, which means easy handling between deck or dock and dinghy. Where compact stowage is an important item (and it always is on a yacht) the lower housing can be quickly "unshipped" reducing over-all size more than a third. Yachtsmen hate a noisy motor, which is another reason for the Lightweight's popularity.

Clip Coupon — Get Catalog!

ELTO DIVISION, Outboard Motors Corporation
3312 N. 27th Street, Milwaukee

Send me the new catalog covering all Elto motors.

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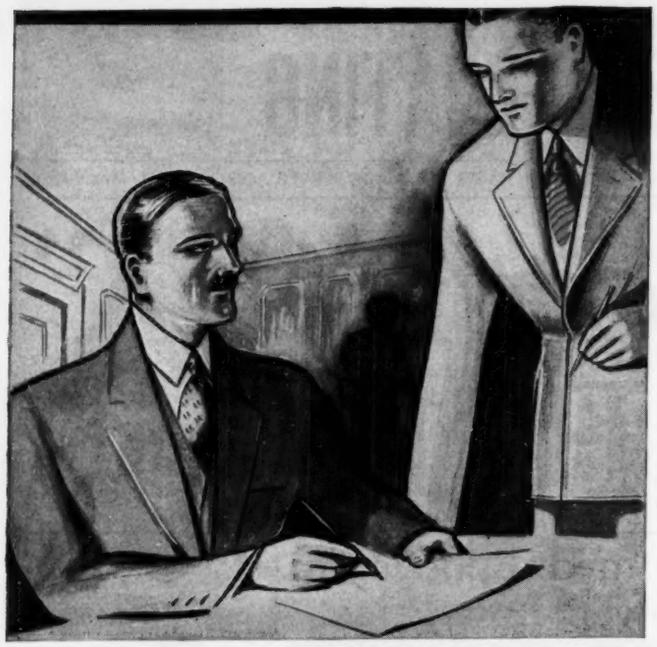


····A SERVICE OF INTEREST TO OWNERS OF FINE YACHTS

LET

MURRAY & TREGURTHA

suggest an answer to your

REPLACEMENT PROBLEM

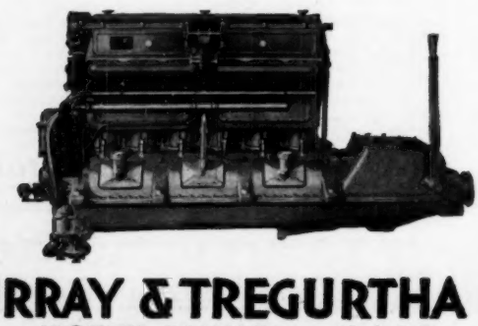
There comes a time when the old engine must go. Its period of service is ended, it must be replaced. What did you learn from it? What will the new engine be?

It is well to study the field thoroughly, consider all possibilities and get true comparisons before making a selection. Ascertain the cost of upkeep, the fuel consumption, the actual cost per H.P. available, the probable life of the engine based on similar installations, and the reputation of the manufacturer for care in the selection of materials and workmanship.

There is in the minds of some owners a feeling that Murray & Tregurtha engines are in the higher price range. When long life, low operating and maintenance costs, and freedom from worry are considered, this is not true.

To substantiate this statement we are prepared to have our engineers study your problem, recommend an engine that will best fill your requirements, and show by actual figures and specific examples that Murray & Tregurtha engines are the most economical engines on the market. There is no charge for this service and you are under no obligation.

We are confident our information will be of interest and await your invitation.



MURRAY & TREGURTHA INC

NORTH QUINCY~MASS.

Impairing Good Design

(*Continued from page 78*)

In sail, the choice of hull is largely one of rule instead of between very sharply defined underbody forms, as in power. Every sailing boat, for instance, is a faired form — a streamlined body. In power boats we get away from the streamlined form as soon as we get up into speed. This begins above the speed-length coefficient of 2 or thereabouts. And at 4 we come to the semi-"V" types, then the full concave "V" and finally the steps and their infinite variation of number, depth, location, etc. Whereas power is still comparatively new in boats, the sailing unit is old in years and development as to type. It is true that the average sailing devotee makes a study of his outfit as few power boatmen ever do. He must needs do so if he is going to have the slightest chance of winning in the races he will undoubtedly enter.

Whether in sail or power, the science of boat design must be respected despite all our yearnings to overcome the handicaps it imposes. In the former, it is. In the latter, it isn't. But it is a known fact that those power boatmen who do resist that eternal desire to make drastic changes, which seem reasonable enough according to lay logic, are the most successful and placid of the brotherhood.

Leaving out those close students who pursue naval architecture as a hobby — and there are a lot of them, although few by comparison with the great host of us groping owners — the power boat sport would be far better off if we would "let good enough alone" as far as fundamental changes are concerned. If we could only get the attitude of the motor car owners, who either purchase stock cars and accept them as they are except for minor gadgets, or else order a custom body and boast of its designer and builder! The oft-recurring errors into which one set of power boat owners after another stumble, to their own chagrin and often to the discomfiture of engine manufacturers and builders of their boats, could be eliminated. But that fetish of speed — and still more speed — is the curse of the power boat field.

\+ + +

You Can't Legislate Sportsmanship

(*Continued from page 83*)

An Italian nobleman, who had traveled 4,000 miles to watch Turci perform, said, "America is the land of the sport but not of the sportsman."

And that's that — again.

⚓ ⚓ ⚓

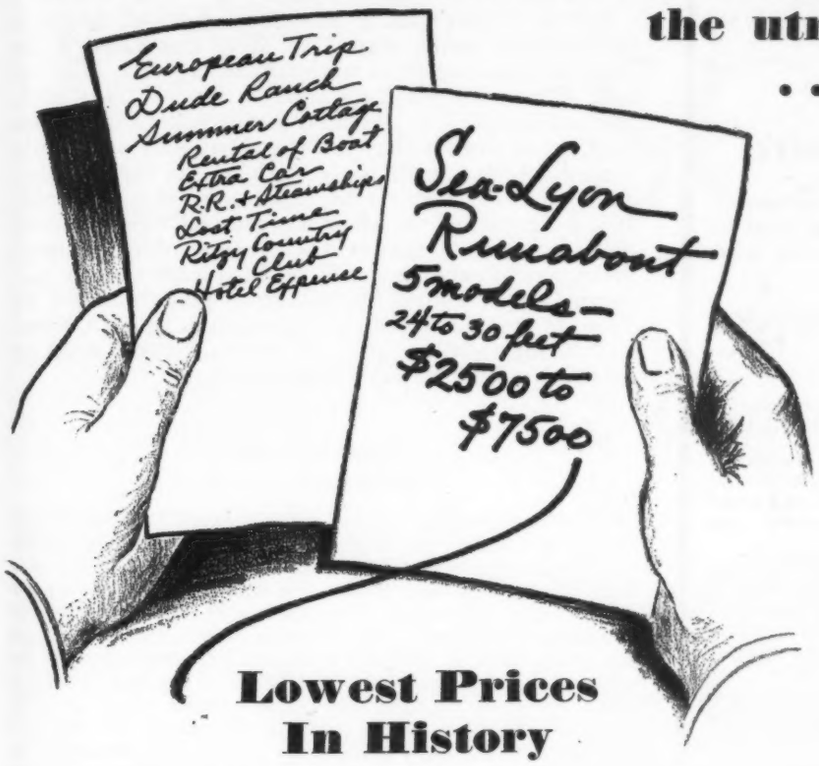
Just where will the next Harmsworth Race be held? At the meeting between representatives of the Yachtsmen's Association of America and the Harmsworth commission in England last winter, it was officially decided to move the course from the Detroit River out to Lake St. Clair. Recently, however, Commodore Wood, in a talk with New York newspaper men, said it had been decided to hold the race on the St. Clair River, half of which lies in Canada. Such a move could not take place without official action of the British commission. No such action has occurred. Other boating officials in Detroit tell me that it would be impossible to hold the race on the St. Clair River on account of the great flow of commercial shipping which could not be interrupted. So where will it be?

At any rate, a race seems assured, if Kaye Don does not "crack up" at Lake Garda, May 22nd to May 29th while attempting to break *Miss America IX's* present world's record of 111.712 miles an hour, which has been officially confirmed by the International Motor Yachting Union.

Balance Your Budget with Pleasure

SEA-LYON

"Better times" will never come . . . for purchasing the utmost in Boat Value . . . a 1932 Sea-Lyon



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24′ SEA-LYON 125 h.p. Chrysler "Imperial" 35 m.p.h.	**$2500**
28′ SEA-LYON 225 h.p. Kermath "Sea Wolf" 44 m.p.h.	**4000**
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30′ SEA-LYON 225 h.p. Sterling "Petrel" 42 m.p.h.	**5000**
30′ SEA-LYON 300 h.p. Hall Scott "Invader" 48 m.p.h.	**7500**

THIS is the year to buy a Sea-Lyon.

1. You can obtain highest quality at lowest prices, which means greatest value. Reduced selling and manufacturing costs have made it possible for us to offer you a finer, faster, smoother running SEA-LYON at the lowest price in history.

2. You can reduce expenses and have more downright fun this summer by purchasing a SEA-LYON than by following your conventional summer routine.

Stay home and enjoy the thrills which only a SEA-LYON can give — plus the added thrill of saving money!

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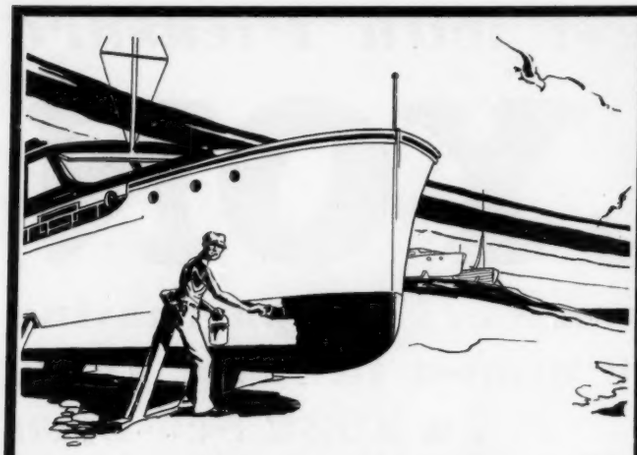

Before she goes "Overboard"

In the interest of economy, bottom preservation and sailing efficiency, be sure, before that boat of yours goes overboard, you paint the bottom with

TOXICOP

the *guaranteed* wood bottom paint. "Toxicop," you know, is actually guaranteed for six months, to keep a boat bottom absolutely clear of barnacles and sea growths. And Teredo Worms, the most destructive marine pest known, just cannot live on a "Toxicopped" bottom.

"Toxicop" costs a little more in the beginning but in the end costs far less than ordinary bottom paints. For it has a greater copper-plus covering ability, eliminates, *positively*, mid-season hauling up, and at the end of the season requires no scraping. That means a real dollars-and-cents saving to every boat owner.

"Toxicop" is the wood bottom paint discovery of the season. It is being used, right now, by wise boat owners everywhere — boat owners who demand the most for their money.

"Toxicop" can be had in two attractive, lasting colors, red and brown. It is easy to apply and gives a smooth, lasting finish with ideal exfoliation properties.

The six months' guarantee is on every quart, half-gallon and gallon can of "Toxicop."

We urge you, send that boat of yours overboard with a "Toxicopped" bottom. Then you can forget your boat has a bottom for the whole season. It will be perfectly preserved and clean as a whistle — always — which means sailing efficiency.

Remember, it's a Woolsey product and that has meant the best for over 75 years.

Place your order for "Toxicop" today and write us for a copy of our free handbook "Suggestions on How to Paint a Boat"

C. A. Woolsey Paint & Color Co.

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MAKERS OF

Copper BEST Paint	Caw-Spar Bakelite Varnish
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Every Marine Paint Need

Commodore Wood had to refuse the invitation to participate in the Italian events because he is building a new Harmsworth boat, to be called *Miss America X* and to be about 31 feet long, or three feet longer than *Miss America IX*. She will have a 10-foot beam, being thus almost exactly the same size as *Miss England II* but considerably smaller than *Miss England III*. The new craft will use the two Packard engines which have performed such heroic work in the *Misses America VI, VII* and *IX*, but they will be equipped with new superchargers which are expected to give them 1800 horsepower each to turn twin propellers at 7500 r.p.m.

⚓ ⚓ ⚓

Before another issue of YACHTING comes off the press, the northern racing season will have started with the longest of all American outboard events, the fifth annual Albany-to-New York race on Sunday, May 15th, starting at 8.00 a.m., daylight saving time. Depressions may come, even if they never go, but they apparently cannot interfere with the growth of the racing game. More than 100 starters are expected in the 132¼-mile Hudson grind and the affair this year will be surrounded with more glamour than ever before. According to present arrangements the race will be broadcast all the way down from a United States Army plane manned by Captain Ronald Appel and Lieutenant David Grimes, and the finish will be sent out over a national hook-up by the National Broadcasting Company.

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Dinghies Again

(*Continued from page 97*)

greatest fun per dollar of anything that exists." This statement would be more effective if it were not so general. Again let me say, to the man who needs a tender this applies. To the man who has no need for a tender, but wants a small inexpensive sail boat for day sailing, or to those who want a smart little one-design class, it does not. The same International Dinghy, so gracefully excluded from the picture, is a far better boat in the latter case. It is slightly longer, costs little if any more, is just as easily "stowed on the club float or on a trailer behind an automobile," and being designed as a sail boat only it will naturally out-perform and out-sail the utility tender. No comparison between the two boats is possible for they do not fall into the same classification. Consequently, if people are led to believe that the Frostbite variety is the ideal class racing or beginner's type, the disappointment is likely to hurt the boat's fine reputation in its own field.

One may say that the boats have already proved their adaptability to class racing in the winter regattas. In this respect may I point out that the idea of winter racing was a fine one and should be kept alive, but you will agree it can hardly be called class racing. The fleet is usually composed of not only the new "dinks," but a large and varied assortment of hulls and rigs. It is impractical, even in the mild winter weather we have experienced, to sail a course long enough to make a real race. At the races I have attended such a spirit of pure unadulterated fun has prevailed that none of the real problems of class racing have been encountered. It might be best if all racing were handled in this manner — certainly if the same spirit existed. But, fortunately or unfortunately, this is not the case, and one is forced to admit that a good time is had at the Frostbites for reasons quite unique to Frostbite racing.

One more point: "Dinghy Dan" states that the 14-Foot International Dinghy "is an out-and-out racing craft, used solely for racing." How he got this idea is hard to understand, and seems to indicate that he is unfamiliar with these boats. It was pointed out in the February issue of YACHTING that these boats are used extensively for day sailing and cruising, or camping, as one uses a canoe. I can also point to two or more crossings of Lake Ontario in them, or to boats that have completely circumnavigated the lake. Furthermore, I know of several that are being used as general utility boats at summer cottages where there is no racing. Certainly these boats are not used "solely for racing."

JOHN S. BARNES

Gar Wood selects SCRIPPS for the 6th Consecutive Year

GAR WOOD INC.
THE GREATEST NAME IN MOTORBOATING

MARYSVILLE, MICHIGAN
March 2, 1932.

Scripps Motor Company,
5817 Lincoln Avenue,
Detroit, Michigan.

Gentlemen:

After running exhaustive tests we have again decided to standardize on Scripps power plants.

This is the sixth successive year that we have chosen Scripps engines and I think that speaks pretty well for the quality of your product.

Very truly yours,

Gar Wood

GAW/VW

A Gar Wood 25-45 runabout powered with a SCRIPPS Model 202 engine.

Standard Power in GAR WOOD Boats

Scripps

SCRIPPS Engines Power these Gar Wood Boats

MODEL	ENGINE	SPEED
18-35 Runabout	Scripps 84	35 m.p.h.
22-35 Runabout	Scripps 124	37 m.p.h.
25-40 Runabout	Scripps 152	38 m.p.h.
25-45 Runabout	Scripps 202	43 m.p.h.
25-45 Limousine	Scripps 202	41 m.p.h.
25-45 Landau	Scripps 202	41 m.p.h.
28-40 Runabout	Scripps 202	40 m.p.h.
28-40 Limousine	Scripps 202	38 m.p.h.
28-40 Landau	Scripps 202	38 m.p.h.
40 Foot Cruiser	Scripps Twins 202 and 203	35 m.p.h.

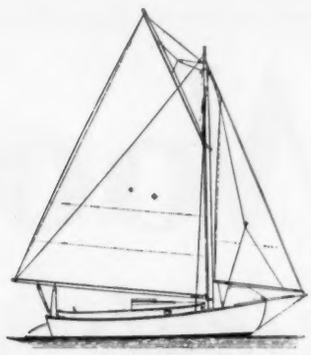
Gar Wood's endorsement of SCRIPPS engines is significant! When the builder of nine champion "Miss Americas" chooses SCRIPPS to power the smart standardized boats which bear his name, the mechanical excellence and dependable performance of SCRIPPS engines is proven beyond question.

Quality boats deserve quality engines. That's why SCRIPPS power is the choice of all good builders. Insist on SCRIPPS.

SCRIPPS MOTOR COMPANY
5833 Lincoln Avenue · Detroit, Michigan

There's a moderately priced SCRIPPS power plant for every boat from 15 to 100 feet—medium or high speed in direct drive —25 to 400 h. p. Write for illustrated catalog and price list.

DEPENDABLE THROUGH 26 HISTORY-MAKING YEARS



● *Outside ballasted centerboard sloop, 25′ x 22′ x 9′ 6″ x 3′. For day sailing with large party or extended cruising. Can be built for less than $2500 with plenty of auxiliary power.*

This is the Day of Little Ships

"Days off" are more important in these strenuous times. Business worries vanish at the helm of your own ship.

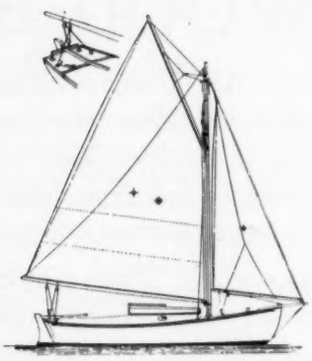
Your cruise will cost little — less, say, than a motor trip. Boats under thirty feet can accommodate up to four people with fair comfort, and their cruising range is almost unlimited. The twenty-footer shown below has cruised from Cape Cod to Nova Scotia in a single season.

First cost and upkeep of such boats are low. No crew to pay or feed; no hotel lodgings and no restaurant meals.

And there is still time to *build cheaply.*

Many small yards that have little to do will take on a small boat at a very low price, and can get her ready for this season's use.

All the skill and experience of this office, which has turned out such famous yachts as MALABAR X, WATER GIPSY, SACHEM, TRIDENT, SVAAP, etc., are available to design your little ship. But to be ready for this summer you must *act quickly.*



● *Auxiliary cruising sloop for two, 21′ 2″ x 18′ 7″ x 7′ x 3′ 3″. Can be built for less than $1500 complete with power.*

John G. Alden

Naval Architect
148 STATE STREET

Yacht Broker
BOSTON, MASS.

More Wrinkles

(*Continued from page 74*)

lay in a pool of flaming oil; then the skipper made a wild dive for the galley fire extinguisher, colliding with the passenger who was sleepily demanding what the devil all the fuss was about.

Now all this happened in the passageway, and there simply wasn't room for an irate skipper and a sleepy passenger in there, so the skipper trampled the passenger under foot. Then, having procured the desired apparatus, he returned post haste and pointed the gun at the flames. Just about this time the passenger came to, and rose from the floor nicely timed to receive the stream of fire extinguisher in his open mouth. Of course, he rapidly removed himself from the line of fire, so rapidly that his head came in violent contact with the carlins which, of course, caused him to emit the foaming liquid and other things over a costly library of first editions.

Meanwhile, the mate, trying vainly to steady herself against the violent motion of the ship, was beating at the flames with a twenty-dollar blanket and wielding it so effectively that she not only extinguished the fire but made short work of many other things, such as the remaining cabin lamps and a fiddle of expensive glassware.

And as we stood panting in the darkness listening to the mournful dripping of the fire extinguisher liquid following the law of gravitation, we each made a vow that we should have a gallows frame that *was* a gallows frame. And as though to seal our vow came a crash from the deck, warning us that our sleep was still far away.

Next day found us ashore getting prices. We returned fuming. It seemed that gallows frames were only for the idle rich. The cheapest thing we had heard of was an arrangement of pipes squeezed flat on the ends and bolted to the strongback, and even for this makeshift the danged pirates wanted as much as the old hooker was worth. Followed a session with rule and pencil. We took some measurements — the width of the trunk cabin where the frame was to be (we needed only one, being a yawl) and the height above the deck we wished the boom to sit.

We purchased a brass coupling for one-inch pipe. Two pieces of one-inch galvanized pipe cut to length, two deck flanges and two heavy pipe straps, and sundry screws and bolts. A visit to the blacksmith and we soon had the smithy hard at work making us two "U" shaped fittings out of 3/16th brass plate. These "U's" were made to fit the thickness of the strongback which we were having shaped from a piece of tough pine. The coupling was now cut in half and each piece welded to the brass fittings. Then the pipe was threaded at each end and the whole works made up into two staunch standards.

The edge of each deck flange was hacksawed off so that they would fit up tight to the cabin side, and the standards were screwed to the deck. Then the strongback was slipped in place and holes bored for the bolts. A coat of paint, first washing the galvanizing with vinegar, and leather pads for the notches, gave us as shipshape a job as you'd wish to see.

On most cruising boats you will find a library on the shelves, while in port, and on the floor, while at sea. Well, that's part of the fun of cruising. Agreed, except when a particularly large and heavy part of that library, while on its way from the shelf to the floor, plants a sharp corner in the eye of whoever happens to be sleeping on the transom below.

We solved the problem with chain. Small bent link brass chain is cheap and looks well. It's a joy to watch the books lean drunkenly out against the chain, then roll back again, completely baffled.

STUART BRYSON

For your benefit and theirs

great paint makers prove the merit of

Bakelite Resin Finishes

NO new material, no new formula is adopted by nationally known paint makers until it has been subjected to exhaustive tests. These are far more rigorous than any service a finish will receive in actual use. Reputations built up over long periods of time are jealously guarded. The fact that a score or more of the great paint makers are producing Bakelite Synthetic Resin marine finishes after thorough tests in laboratory and in service means much to you.

One maker points to a metal panel finished with Bakelite Resin Varnish, that stood their weatherometer test for over 1,000 hours. Another found that of the several panels tested, only those coated with Bakelite Resin Varnishes had the finish intact after 53 days exposed to use in the tropics. A third found that panels coated with Bakelite Resin Varnishes were in better condition after 18 months exposure than those coated with standard spars at the end of 6 months.

These Bakelite Resin Varnishes are not only unusually durable, resistant to water, wear and corrosion — but they are economical. They have greater solid content, yet apply very easily. In other words — a given amount will either go farther or give a heavier coat. You will find these finishes will save in application and in service. Made by leading makers, available at shipyards and dealers everywhere. Use them the next time you refinish. Write for folder **20**, giving full information, and also the names of manufacturers.

BAKELITE CORPORATION, 247 Park Avenue, New York, N. Y. . . 635 West Twenty-Second Street, Chicago, Ill.
BAKELITE CORPORATION OF CANADA, LIMITED, 163 Dufferin Street, Toronto, Ontario, Canada

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The registered trade marks shown above distinguish materials manufactured by Bakelite Corporation. Under the capital "B" is the numerical sign for infinity, or unlimited quantity. It symbolizes the infinite number of present and future uses of Bakelite Corporation's products.

SYNTHETIC RESINS

FOR BETTER MARINE FINISHES

HERE'S HOW!
TO THE WHITEST YACHT
IN ANY HARBOR

MARSH GAS, — That enemy of white paint has been conquered!

Old Salem Yacht White is formulated to withstand continued exposure to marsh gas without the slightest discoloration.

Many beautifully white, freshly painted yachts have left the ways only to have their immaculate finishes quickly tarnished and discolored by marsh gas. This gas is destructive to ordinary white paints. It is most active at night when the air is quiet and damp. At such times a perfectly white paint may be thoroughly discolored during one night.

Thousands of yachtsmen have adopted Old Salem Yacht White because its whiteness endures every exposure. Their testimonials of lavish praise are prompted by actual, superior results.

You, too, can secure a white finish which will retain its brilliance for an entire season if you are careful to specify this marsh gas proof product.

ALSO

McInnes Green Anti-fouling Composition
Pettit's Jersey City Copper Paints.
Pettit's Shipendec Paint
Bak-Spar Varnish, 100% Pure Bakelite Gum

SPECIFY THESE PRODUCTS
AND GET THE BEST

Send for descriptive booklet and free copy of the Atlantic Coast Tide Tables

PETTIT PAINT CO., INC.
JERSEY CITY, N. J.
Since 1861

Harbors

(Continued from page 67)

Scouting along the waterfront at Edgartown is a pleasant occupation. There are various docks and piers, nooks and crannies; different kinds of craft tied up, or coming and going; and always something interesting going on. The southern end of the harbor opens out into Katama Bay, wide and shallow, where the quahoggers with their long rakes haul up bushels of those tasty hard-shelled clams. If you have a sailing dinghy, jump in and spend a day knocking around Katama; or you can rent one of those stubby little Wood's Hole cats.

Yes, Edgartown is a rare spot — a place you like to make your headquarters for several days at a stretch. You can get magnificent sailing within ten or fifteen minutes of the harbor; and when you drop anchor again, there's the fascinating variety of shore and harbor activity to entertain you indefinitely. In fact, you don't know Edgartown until you've spent several days there. When you've done that, you want to come back again and again.

\+ + +

Heart-Break Passage

(Continued from page 62)

or heard the breakers on the shoal. Each time we came about I wondered how much more of such work the sails would stand.

It would have been easy to anchor now, but the barometer had frightened me and the wind was freshening. A westerly blow seemed imminent. The prospect of a dirty night, with anchors possibly failing to hold in a sandy bottom, canvas unable to cope with real wind and with all of Nantucket shoals immediately to leeward was not a pleasant one.

Still, something had to be done, and soon. Our short tacks were becoming shorter steadily. The breakers to the south'ard were nearer the beach. This, at least, gave me moral assurance that the land was Nantucket and the shoal that long spit known as the Old Man. We were in a funnel-shaped trap, and a strong current was evidently setting us further and further into difficulty. If night came on and found us still beating back and forth — no! We must get out, and at once.

We draw ten feet. Old Man Shoal has several nine-foot spots and one seven-foot patch. In other places it ranges unevenly from ten to eighteen feet in depth. But those depths are measured from the surface of a smooth sea. In the troughs of the big seas now sweeping northward there might be no place in which we could hurdle the shoal. There was nothing to do but flatten the sheets and sail as hard as we could to the westward in an attempt to round that end of the shoal. Failing that, we would have to grope our way east between land and shoal, but with all the dangers which lay that way that course was one of last resort.

It took an hour to reach the western end of the main body of the shoal. Still to the westward were four little shoal patches on which the combers broke threateningly. We took another tack inshore, came about and headed to sea. But the tide was racing and it held us for no gain.

Ahead there was a narrow stretch of water where the seas did not break. There they rose steeply, their crests wavering, and then passed on, mollified. Deeper water there, all right! So I let the ship off, felt her surge ahead with gaining speed, and held my breath as we shot through the gap. To port and starboard seas were toppling in angry confusion. We saw the jibboom rise sharply, felt a great sea slide under us, and then slid down a steep wall of water into safety. The lead ran out and out — fifteen fathoms! We were truly clear.

Hall-Scott INVADERS power the fastest Matthews "38"

●

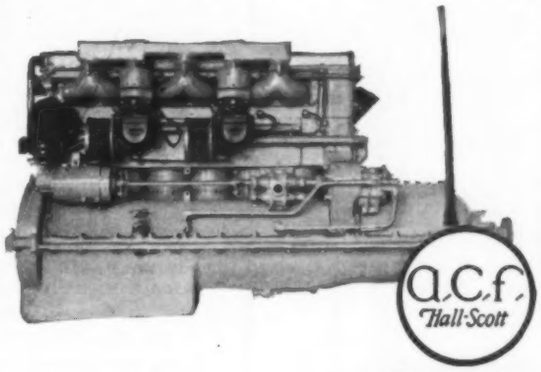
The Matthews Company recently delivered to a Chicago sportsman at his Florida fishing rendezvous the fastest 38′ sport cruiser ever built in its Port Clinton yards.

This cruiser, *Apache II*, powered with a pair of Hall-Scott 275 h. p. INVADERS, develops 32 m.p.h. Equipped with twin rudders, which are standard. Steady trolling speed is obtained with one engine.

Fast . . . powerful . . . *Apache II* is one of the most complete playboats ever to cut deep water. A live-bait well, with circulating sea water . . . a fish-box for large catches of sailfish and swordfish . . . a foreshortened canopy to permit the free use of tackle from the two swivel-chairs aft . . . a crow's nest for sighting and a bowsprit pulpit for harpooning the big ones—these are a few of *Apache's* unusual features. And comfortable accommodations for four are found in the main cabin.

More and more builders of fast, sturdy, deep-sea craft are turning to Hall-Scott for their power requirements. And the Hall-Scott line is so complete, nearly every builder and owner can find here the engine to suit his needs.

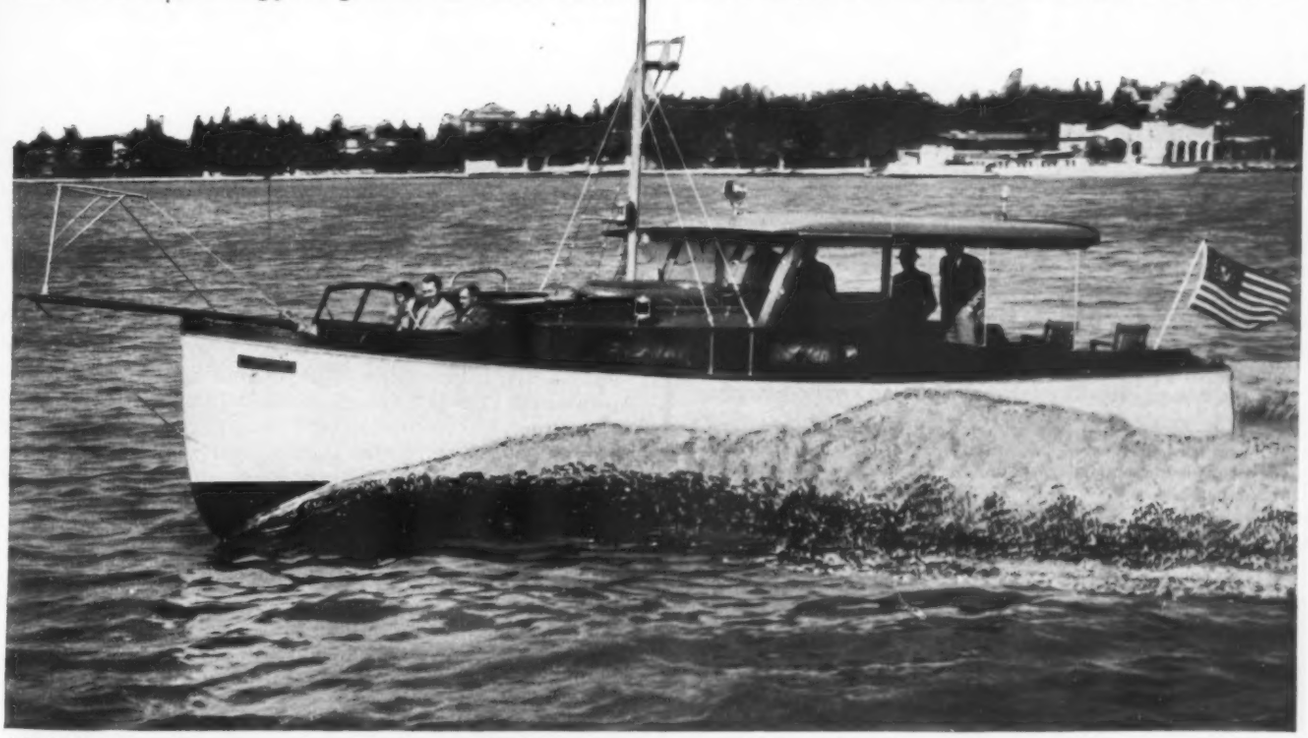
●



The INVADER *by Hall-Scott . . 250-275 h.p. 6 cylinder marine engine for express commuter and fast cruiser service. Compact, simple in arrangement, sturdy. Built in pairs for twin installation.*

HALL-SCOTT MOTOR CAR COMPANY

Division of **American Car and Foundry Motors Company**
254 West 31st Street, New York • Detroit, Michigan • Seattle, Washington • Los Angeles, California • Berkeley, California Vancouver, British Columbia • In Miami, Florida, J. Frank Knorr In New England, Marine Equipment Company of Boston, Mass.



APACHE II, *a 38′ sport cruiser built by The Matthews Company, Port Clinton, Ohio, for Gulf Stream fishing. Powered with a pair of Hall-Scott 275 h. p.* INVADERS. *Speed 32 m. p. h.*

Mr. Boat Owner—

The following are the List Prices of HYDE TURBINE TYPE PROPELLERS to which

25% DISCOUNT APPLIES

Prices F.O.B. Factory at Bath, Maine

Diameter	*Two Blade*	*Three Blade*	*Extra Boared & Key Seated*
8"	$ 4.50	$ 6.50	$ 1.40
9"	4.75	7.25	1.40
10"	5.00	8.00	1.40
11"	5.50	8.50	1.50
12"	6.50	9.50	1.70
13"	7.50	10.00	1.80
14"	8.50	11.00	1.90
15"	9.50	12.00	2.20
16"	11.00	14.00	2.20
17"	11.50	15.00	2.50
18"	12.00	16.00	2.50
19"	14.50	19.50	2.75
20"	17.00	23.00	2.75
21"	18.50	27.50	3.10
22"	20.00	32.00	3.10
23"	22.00	35.50	3.50
24"	24.00	39.00	3.50
25"	27.00	42.50	4.00
26"	30.00	46.00	4.00
27"	34.00	51.50	4.60
28"	38.00	57.00	4.60
30"	46.50	62.00	5.10
32"	52.00	70.00	5.80
33"	56.00	75.00	7.00
34"	59.00	79.00	7.00
35"	62.50	83.50	8.00
36"	65.00	87.00	8.00
38"	80.00	104.00	9.40
40"	100.00	134.00	10.70
42"		144.00	13.50
44"		168.00	14.75
46"		200.00	16.00
48"		235.00	20.00
50"		255.00	26.00

WHILE we have reduced our prices, we have not changed our quality. Only pure virgin metals — no scrap — are used in HYDE PRODUCTS. Our guarantee is your protection. Insist on a guarantee and you will

Insist on a HYDE

If there is no HYDE dealer in your locality, or if you are unable to obtain what you require, send your order direct to the factory. It will receive prompt and careful attention.

We are equipped to repair damaged propellers, accurately adjust the pitch and carefully balance and refinish them. Send your damaged wheels to us for an estimate of repair charges.

A copy of our booklet, *"Propeller Efficiency,"* will be mailed without charge. It illustrates all of the HYDE PRODUCTS.

HYDE WINDLASS COMPANY

BATH, MAINE

A large stock of HYDE propellers and HYDE products is carried by C. R. ANDREWS, 143 CHAMBERS STREET, NEW YORK CITY

Tel. BArclay 7-1873

The fog then tore as though slit with a sword. Sankaty Head Light and the whole barren coast of Nantucket showed plainly. A blue sky gave the lie to our forebodings of bad weather. The ship stood swiftly off to the eastward, threaded her way through the shoals and the next day was anchored in Boston harbor.

I believe that my carefully kept chronometer log, running day by day for three years, the good lookout maintained, the painstaking use of the lead and a clear record as navigator, mate and master on sailing voyages totaling now nearly 60,000 sea miles will clear me of any charge of careless or slipshod navigating, so it is interesting to consider what could have been done to avoid the situations just described.

My chronometers, it turned out, were losing respectively 33, 38 and 40 seconds a day, but the difference between these rates corresponded so closely with their usual small rates that I had not been able to detect their departure of accurate time-keeping. Had the instruments been made by different makers this strange synchronization probably would not have occurred. Captain Lecky warns in his "Wrinkles" about the danger of having chronometers of the same make and age. Apparently, there have been other such occurrences.

Our soundings were obviously at fault. The most glaring discrepancy was in the record of depths, and this was due to our having to assume that the amount of line out when the lead appeared vertical was an accurate measure of the depth of water under us. I think that never, in depths of more than twenty fathoms, is it possible to get accurate soundings with such a hand lead and line. Errors may amount to as much as ten or twenty percent as depths and the speed of the ship's drift increase. So a sounding in seventy fathoms on a shelf like that off Nantucket is practically worthless.

Soundings are indispensable, however, and I have solved my problem in that regard by getting one of the Hand depth recorders which Wilfred O. White has turned out with a neat, hand-operated reel, 125 fathoms of small galvanized wire and a hollow iron "lead" which carries the valve in its interior and brings up samples of the bottom in exactly the same fashion as old type leads do.

The Hand valve measures depth by the extent to which air in a tube is compressed by water pressure. On recovering the valve, after a sounding, the amount of water which has forced its way past the valve into the tube is measured, giving an astoundingly accurate measurement of the depth to which the valve descended irrespective of the amount of wire let out. With this device one can sound at speed. In ordinary depths one man can easily make a sounding in five minutes, repeating the operation many times during a watch.

Finally, don't be misled by the accuracy with which the kinds of bottom are marked on the charts. The charts are usually right, but when soundings are five miles apart, as they were on the rather large scale chart reproduced herewith, it is quite reasonable to suppose that in between two of them it may be your bad luck to encounter a patch or streak of quite a different kind of bottom than you would expect.

And what the oceanographers call green mud may look like something different to you when viewed by tired eyes, under a flashlight and with a background of tallow or cup grease. We got nothing resembling green mud with our soundings on that westernmost line where we must have been. We did get a greenish mixture of little scaly objects mixed with sand and tiny pebbles. Maybe in daylight it would have looked like mud. We called it fine gravel, sand and shell, and congratulated ourselves on being safe and clear to the eastward of that graveyard of ships, Nantucket Shoals.

CRUISABOUTING

A SURE CURE FOR RAGGED NERVES!

IF YOUR nerves are ruffled and ragged (and whose aren't these days?) Cruisabouting will smooth them down. A Cruisabout will enable you to go far from the maddening throngs of the city — far from the din, dust and dirt of traffic where you, your family and your friends can fish, swim, picnic, cruise and *really live* in quiet and in luxurious comfort.

Each year you'll look forward to your annual cruise through the hundreds of miles of calm, protected and safe waterways. Each year your vacation will lengthen itself from two weeks to a whole season, and each vacation will be a cherished memory.

Cruisabouting is not expensive. A Richardson Cruisabout can be purchased, operated and maintained at a cost equal to (and in many cases is less than) that of a good automobile or a medium size summer home. Properly cared for, a Cruisabout will give a lifetime or more of service.

Take your first step toward a Cruisabout by writing for Cruisabout booklet "F-32" illustrating and describing these finest of all medium size, low priced, floating homes.

DON'T MISS THIS CRUISE! — The Richardson Cruise across New York State via the Barge Canal and Hudson River is safe, interesting, pleasant and instructive. The purchase of a Cruisabout or "Baby" Richardson will entitle you to participate in this cruise without cost for gasoline, oil, pilot and mechanic service. Order your Cruisabout now.

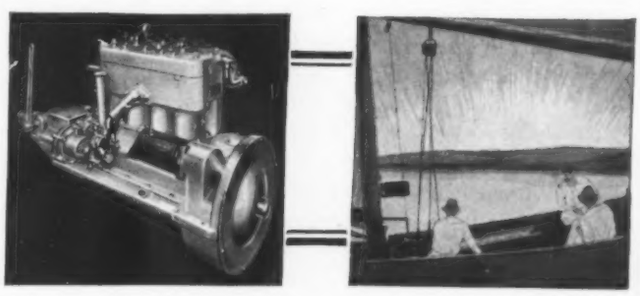
RICHARDSON BOAT COMPANY, INC.

365 Sweeney Street **North Tonawanda, New York**

NEW YORK CITY	AMITYVILLE, L. I., N. Y.	BOSTON, MASS.
Bruns-Kimball & Co.	F. D. Homan	Walter H. Moreton Corp.
5th Ave. & 15th St.	South Bayview Avenue	1043 Commonwealth Ave.

RICHARDSON CRUISABOUTS

Palmer Engines



. . . make excellent auxiliary motors for sailing boats . . . because of dependability, compactness and freedom from vibration. Palmer Engines range from 2 to 150 horsepower. The Palmer-Ford Conversion sells for $365 complete with motor.

PALMER BROS. ENGINES, Inc.

4 Hathaway Road, Cos Cob, Conn.

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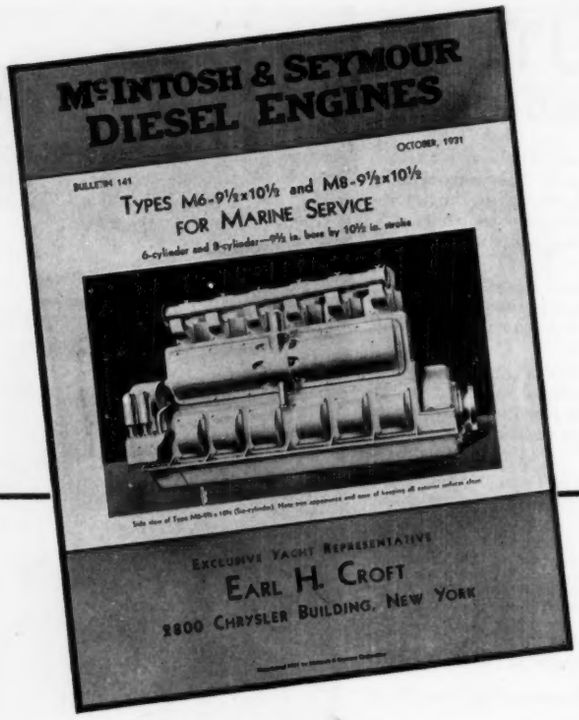

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Which shall we send?

DIESEL engines built by McIntosh & Seymour Corporation are available in 6-cylinder and 8-cylinder units for speeds up to 600 r.p.m., capacities up to 1600 h.p. and right and left matched pairs for twin-screw vessels.

All are outstanding for maximum design standardization, low head room and short length, moderate weight, and well enclosed but readily accessible moving parts.

For ideal operating conditions — superpower in a compact, clean, cool engine room, smooth quiet smokeless running at very low fuel cost, quick starting and maneuvering, and carefree attendance — these units, backed by able engineering and the largest exclusive Diesel building plant in the country, should be your preference.

Tell us about your proposed power requirements, so we can send those bulletins which will interest you most.

McINTOSH & SEYMOUR CORPORATION

Division of American Locomotive Company

EXCLUSIVE YACHT REPRESENTATIVE

EARL H. CROFT

2800 Chrysler Building + New York City

Boston: 131 State Street

Cruise of the "Abadab"

(Continued from page 65)

and levees, but the barge lines had the crossings well marked with buoys. Just after clearing this spot, perhaps the worst in the river, our pump jammed again and we had to anchor off Upper Neals beacon in the east channel off Island No. 35 at 6:30 P.M., 42 miles from Memphis. After supper Mac and Elton took the tender and crossed the river to the U. S. Army Dredge *Iota* where the machinist on board turned out new pump vanes. When reassembling the pump this time Mac reversed the rotor, which, with the new vanes, ended our pump troubles for the rest of the trip.

On August 2nd we reached the ferry landing at Cairo, where the owner was waiting to greet us. The total mileage from New Orleans was 987 miles. Directly off Cairo Point a clear line of division between the waters of the Mississippi and Ohio Rivers is marked by the sharp contrast in color, the Ohio carrying much less mud. The weather from Memphis had been hot, but free from the rains and storms encountered in the lower stretch. Practically no mosquitoes were seen on board but the flies and June bugs were a continuous source of annoyance. The upper river, while now under fairly complete control, had in past years wandered all over the country, forming new islands, lakes, and leaving old channel cuts far inland, all of which were noted on the old government charts. The Army Engineers maintain headquarters at strategic points, and we passed, moored to the banks, many large barges on which were constructed comfortable quarters for their forces. At many places derrick boats were employed covering the levees on the outer bends with large slabs of cast concrete. At other locations huge willow mats and bulkheads were being constructed in the water, later being towed to weakened sections of the levees. Often, while at anchor during the night, we could hear the rumble and splash caused by large sections of the undercut banks as they caved in. The river bottom is in a constant state of change. A snag hooked to the bottom will often cause a new bar to form in a few hours, only to be later cut away by some other quirk of the current.

At the time of this trip the river was at about its lowest stage. We drew about five feet underway and the barge lines were loading to about six feet draft. At intervals along the river bank large gauge boards are located on which are posted twice a day the depth of water for that station and letters F, S, or R, designating that the river is falling, stationary, or rising. During high water many more snags and drift are lifted off the banks and carried downstream. One advantage of running at low water is that many of the bars are uncovered, and if one goes aground the chances are all for a rise in the river.

The Ohio River is much easier to navigate and apparently is under complete control. Much of the channel runs between high rocky cliffs amid beautiful scenery and few levees are necessary. The low water is controlled by dams and locks which serve to step the river down in a series of pools. The current is less than in the Mississippi and the river much freer from drift and snags. During high water, which at Cincinnati has reached a height of 69 feet above low water, the dams and locks are entirely submerged and traffic simply follows midstream over the dams. During these times, I was told, the current is much stronger and more drift is encountered, most of which comes from the flooded smaller tributaries. Collapsible wickets on top of the dams control the pool levels upstream and are kept adjusted by small derrick scows located at each dam. The biggest menace during low water navigation are the many stone dikes or jetties that project out from the shores. During our trip they were usually about 6 to 18 inches under

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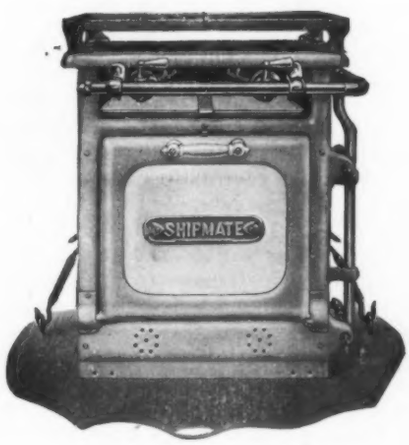

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The 1931 Winners Were Kenyon Equipped

The Dorade, winner of the 1931 Transatlantic and Fastnet races, was equipped with a Kenyon Marine Speedometer

Kenyon Marine Speedometers Record Speed and Changes of Speed at All Times

Perhaps it is significant that the outstanding deep sea racing craft of 1931 were equipped with Kenyon Marine Speedometers. The Dorade, winner of the Transatlantic and the Fastnet; the Teragram, winner of the Class A Cape May; the Water Gipsy and the Mistress that placed second and third in the Fastnet; were all Kenyon equipped.

This ingenious, accurate, sensitive instrument advises the skipper instantly of changes in speed, and enables him to adjust his sails to secure the maximum drive at all times. It is the only speedometer sufficiently sensitive to register changes in speed due to changes in sail setting. It will be a vital factor in the 1932 Bermuda race.

If you are entering the Bermuda race it will be to your advantage to write for our descriptive booklet which will give you complete information about Kenyon Marine Speedometers and Logs.

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water and often unmarked. In the upper stretch we noted several huge concrete ice breakers, behind which steamers moor during heavy ice runs.

The government charts were not as reliable as those incorporated in the Ohio River Book, published by the Army Engineers. The fourth edition, 1929, was used exclusively in working our way upstream and we noted only a few changes in the channel or beacons. The beacons are numbered and listed in detail in the book, with distances and other information, such as clearances under bridges, elevations, etc.

The twin locks at Louisville have a high lift and overcome the old falls that blocked navigation through Louisville in years gone by. Freight then had to be transferred by land to other barges above the falls for the upper river run. After taking on oil we moved downstream a short distance and tied up alongside the Coast Guard Station, where we took on water, ice and food supplies. This outfit, located on a modern steel barge, is fully equipped and manned like a regular coast station. At 6:00 P.M. one of the ladies who had started out with us at Miami, came on board with her husband and we ran upstream for seven miles, anchoring for the night off the north end of Six Mile Island.

The 5½-mile stretch between Aurora and the Miami River was almost entirely covered with logs and drift brought down by a recent cloudburst and flood up the Miami River. A bad bar makes out off the mouth of this river and requires holding close to the starboard bank.

When near Bromley, on the Kentucky side, I blew one whistle to a little oil scow being pushed downstream by a motor boat, the operator of which seemed to be asleep. Finally a long blast woke him up and as he came to, who should it be but our old friend John, the former "cabin boy."

Between the Cincinnati Southern R. R. and the Chesapeake and Ohio R. R. bridges we made three runs as a check on our speed and r.p.m. in order to have data for the design of a new wheel. The average slack water speed worked out at 9.16 miles at 520 r.p.m. and 4000 inches fuel oil pressure.

Continuing upstream six miles past the downtown section of Cincinnati, we anchored just below the Little Miami River. The Queen City Yacht Club, where the *Abadab* was to moor permanently, was four miles further upstream. After getting the owner and his guests ashore, I turned the good ship over to Mac, who had decided to stay with the boat for the rest of the summer, thus ending our trip, 38 days from Miami, Florida. Upon hauling out this winter, the owner wrote me that there were no scars or damage to the hull or propeller, indicating that we missed most of the bars and snags after all.

The fuel oil consumption was naturally increased on the river run due to our inability to obtain heavy fuel oil and the loss of speed against the current, and also on account of leaking valves, extra maneuvering, etc. The average price paid on the river was about 9 cents per gallon.

Summary:

Total distance on rivers		1519 miles
Miles per gallon	1.31	Upstream
Fuel cost per mile	$0.0687	Upstream
Av. speed Miss. Rv.–6.11 Av. speed Ohio Rv. –7.48		6.52 miles
Running time Miss. Rv.–163.02 hrs. Running time Ohio Rv. – 69.54 hrs.		232.56 hours
Fuel per h.p. per hour		0.73 lbs., upstream

Buying the proper grade of oil at about 8 cents should give a slack water economy of about 2½ miles per gallon, or 3¼ cents per mile for fuel.

Spring Showing

NEW MATTHEWS CRUISERS

MATTHEWS Dealers are now showing the latest Matthews Cruiser models for 1932. Be sure to see the remarkable values offered—the husky, seagoing comforts—the luxuriously new and modern cabin appointments—the smartly turned lines incorporated in both the "38" and "46" hulls. You will be astounded at the low prices which prevail. The Twin Cabin "38," sleeping seven passengers, at $5980 afloat Port Clinton, is an example of the thrifty advantages offered by the largest builders of cruisers in America. New-value leadership awaits your discriminating inspection. See these new Matthews Cruisers at your nearest Matthews Dealer.

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Make reservations early with B. Holt Willard, formerly of the Indian Harbor Yacht Club, Greenwich, Conn., instructor to the Women's Champion of the United States, and others. All other camp sports: shooting, golf, tennis, etc., on a 65-acre pine covered island. Every modern equipment and convenience. Tenth season. For booklets, etc., write to 415 Lexington Avenue, New York City, or to M. W. Murray, 18 Fairfield Street, Newtonville, Mass.

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"Maitenes II" in the Fastnet Race

(*Continued from page 70*)

before driving clear. The skipper then decided to stand by until the weather moderated. An anxious time followed, for the men were still aboard and the trawler had lost her only boat; but the ship was clearing the banks, the seas became more regular, and soon the wind started easing. The final gale warning failed to mature, and the ship was finally taken in tow at 7:30 A.M. on Monday.

⚓ ⚓ ⚓

As for the behavior of the boat, I have nothing but praise. *Maitenes* is a magnificent sea boat. Had we not been driven over the Labadie Banks all would have been well; and had we been off soundings there would have been no cause for anxiety, for *Maitenes* could have been left to her own devices, if overpowered by the weight of the wind, or been put before the seas and allowed to run with perfect safety. And comparing her performance in last year's race, when she ran before a gale of wind and a high steep breaking sea under full sail — logging, once, ten knots, and never shipping a drop of water — while *Ilex* was forced to hand her mainsail, I am not at all sure that a drogue towed aft is conducive to safety. The sea this year was the steepest I have yet seen, often too steep for any boat to rise to; but it seemed, at times, as though the drogue tended to keep her stern from lifting freely. Granted, it steadied her; but I believe she would have been better without it, would have been steady enough with a small headsail sheeted well amidships. Her speed would then have been eight knots or more, but with the heavy slick of oil flowing astern the danger from pooping seas might have been less. It is an interesting point; and I have come to the conclusion that if caught in a similar sea again, I should not attempt to reduce a ship's speed as much as possible, nor keep her running at full speed as we did last year, but aim at striking a happy medium.

Nevertheless, a Bermudian sloop is perhaps the most difficult of all boats to handle in severe weather. When close-reefed, or when the trysail is set, the center of effort moves a long way forward, and however small the single headsail, she is liable to carry lee helm. This, combined with the windage of a tall mast, and a cut away forefoot, may cause her to fall off in certain states of wind and sea. I am certain, however, that *Maitenes* would have kept bow on without difficulty in deep water, her inability to do so during the last few hours of the gale being due much more to the pyramidal seas than to the tremendous driving squalls. Even had she been rigged as a cutter, with mast placed nearly amidships and with two headsails, I rather doubt if matters would have been much improved. And when all is said and done, it must be remembered that speed and ability to lie to quietly, without forereaching, in every state of wind and sea, are opposed virtues. A Bermudian-rigged boat — with the exception of schooners and ketches, perhaps — seems to require more lateral plane and forefoot than a gaff-rigged one of the same size for her *ultimate* safety. Granted, the identical conditions would not be met again once in a thousand times, but it is the thousandth chance that matters; and that may lead, alas, to tragedy and disaster.

ADVERTISING PAGES REMOVED

New Courses in Ship Drafting and Design in New York City

A number of new practical courses in ship drafting and design are now being given at the Drake School of Drafting, 154 Nassau Street, New York.

A course in structural ship drafting will include such topics as details of construction, determination of scantlings, the caulking, riveting, testing of the principal members of the ship's structure, and the drafting of shell plating, mid-ship section, and other structural plans.

A course in yacht drafting and design will include such subjects as drafting room equipment, explanation of line drawings, elementary calculations and their applications to yacht design, methods of preparing new designs, and construction details.

In addition, there will be a course in applied naval architecture for those who desire to acquire a non-technical explanation of the science of ship design.

These courses, taught by experts, are planned not only for laymen but also for those who, though engaged in the industry, desire to perfect their knowledge. Classes will be given in the day and evening.

+ + +

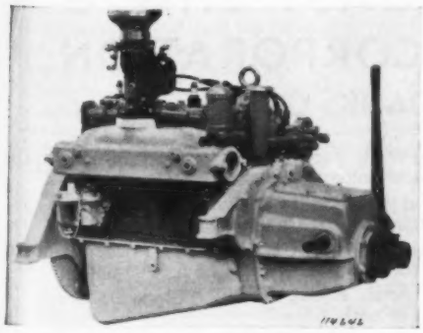
Star, Metre and Square-Metre Yacht Sales Representative in Detroit

F. Rankin Weisgerber, 28 Larned St., Detroit, will represent Joseph Parkman, builder and outfitter of Star boats, and handle sales for Star boats in that section of the country. In addition, this new office will act as sales representative for Knud H. Reimers (Gustaf A. Estlander), of Stockholm, designers and builders of Metre and Square-Metre racing boats and outfitters of Swedish marine hardware and sails.

+ + +

The Blue Streak — A New Gray Engine

The Gray Marine Motor Co., of Detroit, recently announced a new addition to their line of marine engines — the Blue Streak, a 125-cubic-inch class racing motor. The well-



The new 55 h.p. Gray Blue Streak engine which fills the requirements of the 125-cubic-inch class

known features of the Gray high-speed Phantom line have been incorporated into this compact new motor.

Starting with a thoroughly proven cylinder block assembly, the new motor has been strengthened in several important places. A bore of 3" and stroke of 4" give the motor a displacement of 113 cubic inches. The total weight is 339 pounds. A Holly down-draft carburetor and Paragon reverse gears are standard equipment. The motor's overall length is 30 5/16".

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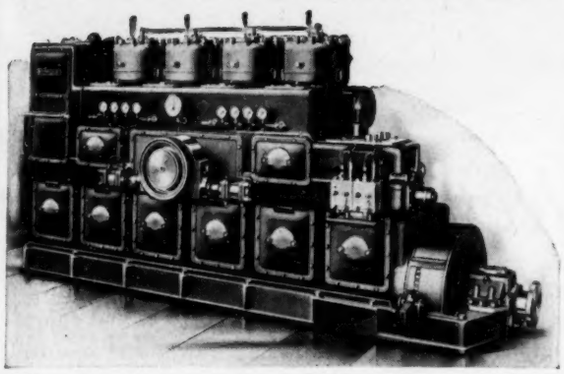

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For Sale: Friendship sloop, equipped with 65 h.p. Sterling engine. A bargain to early buyer.

For Sale: 32 ft. over all Cape Cod Cat Boat, condition not so good; a bargain however.

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+ + +

New "B" Battery Eliminator for Boat Radios

The Pines Winterfront Company recently announced a new auto and boat accessory — the Pines "B" Battery Eliminator for auto, motorboat, and airplane radios. So successful has this new product been in its ability to improve the tone quality and selectivity of radios that many leading manufacturers are recommending its use with their sets.

Pines "B" Battery Eliminator is simple and rugged in its construction and consists of a triple-tested motor in connection with a special rotary transformer. It takes the current from the regular storage battery, steps it up, rectifies and filters it, delivering to the set a constant current which produces a clearness of tone heretofore thought impossible.

Before placing the Pines "B" Battery Eliminator on the market, it was subjected to the most rigid tests. One of the most severe temperature tests known — a test under temperatures of from 35 degrees below zero to 150 degrees above — failed to impair its perfect performance. The results this "B" Battery Eliminator made possible were comparable in tone, distance, and selectivity to those of home radios operated by electric power. Actual tests also showed that the battery drain is slight — actually less than the amount of current necessary to operate a single headlight.

The installation of the new Pines "B" Battery Eliminator requires a space only 5⅜" by 8", and 6¼" deep. This is approximately one-third the space required for the ordinary "B" battery. Its total weight is only 15 pounds, including a special heavy metal container, which protects it from all possible damage.

+ + +

"Soundings" — A New Publication

The C. A. Woolsey Paint and Color Co., of Jersey City, has recently published a pamphlet named "Soundings" which should prove of interest and value to yachtsmen. It contains information about marine paints and the latest developments in that field. Future issues of "Soundings" will not be published at definite periods but will be printed on occasion. Readers of YACHTING interested in receiving copies may send their request to the Woolsey office at Grand Merselles St., Jersey City.

+ + +

Largest Yacht Basin

The largest yacht basin in the world, with accommodations for approximately 7,000 boats, is planned as part of the projected Marine Park on Rockaway Inlet, Brooklyn, N. Y.

One basin, 3,500 by 2,000 feet square, would provide permanent berths for 1,400 yachts. A separate harbor for upwards of 1,000 outboard motor boats and a dock and storage facilities for 500 sailing canoes are included in the plans. In addition there is a canal, two and one-third miles long and 500 feet wide, and a circular pond, a half-mile in diameter, planned in the center of the park which would accommodate some 4,000 small boats.

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Women do it with creams — and men SHAVE WITHOUT LATHER — they use Barbasol!

You've seen outdoor faces when they're as crackly as parchment, as dry as Sahara — but never shaved with Barbasol. Because it is a cream, free from harsh, biting alkalis, Barbasol leaves the skin soft, smooth and pliable for hours after shaving. And its wonderful ingredients furnish sure protection from sunburn and balm-like healing power.

With Barbasol, you need no brush — no lather — no rub-in. Like magic, this cool, quick shaving cream softens the beard instantly, yet holds the whiskers erect for a close, clean cut. And your razor gliding through on a thin film of cream, whisks them off in a flash.

Now use Barbasol right. Follow these instructions and you'll follow the crowd.

1. Wet your face and leave it wet. **2.** Spread on Barbasol. (No need for a vigorous rub-in.) **3.** Wet a good blade—and SHAVE.

That's all there is to the finest shave in the world. It's simple, easy, quick. Try it today. Generous tubes at all druggists', 35¢ and 65¢, or large jar, 75¢, will quickly make you a Barbasol Believer, too.

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In every 30¢ tube there is a free Tefra toothbrush refill, to fit a lifetime Tefra refillable toothbrush handle. For full information, tune in Barbasol radio programs listed below.

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Singin' Sam, the Barbasol Man, in songs you can't forget. Every Monday, Wednesday and Friday evening, at 8:15, Eastern Daylight Saving Time, over an extensive Columbia (WABC) Broadcasting hook-up.

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The Old Singin' Master and his singers—mellow old hymns and ballads the way you like them. Tune in every Sunday night at 10:15, Eastern Daylight Saving Time, on the N.B.C. (WJZ) Blue network, coast to coast.

Consult radio page of your local newspaper for stations